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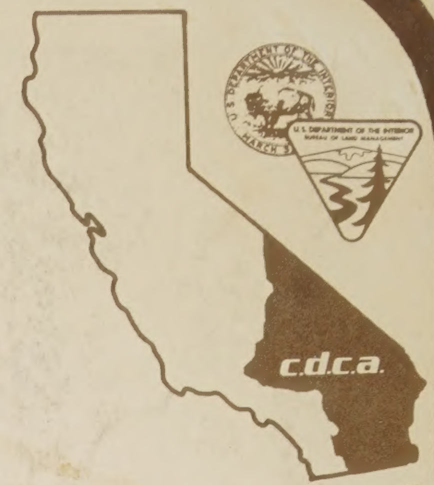
Plan Alternatives and Environmental Impact Statement



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U. S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Bureau of Land Management
California State Office
State Director
Sacramento, California

California Desert Advisory Committee

Desert Planning Staff
Riverside, California

Riverside and Bakersfield Districts
BLM Staff

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the CALIFORNIA DESERT CONSERVATION AREA

Plan Alternatives and Environmental Impact Statement

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FEBRUARY 1980

James B. Ruch
California State Director
Bureau of Land Management

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Plan Alternatives and Environmental Impact Statement
DRAFT

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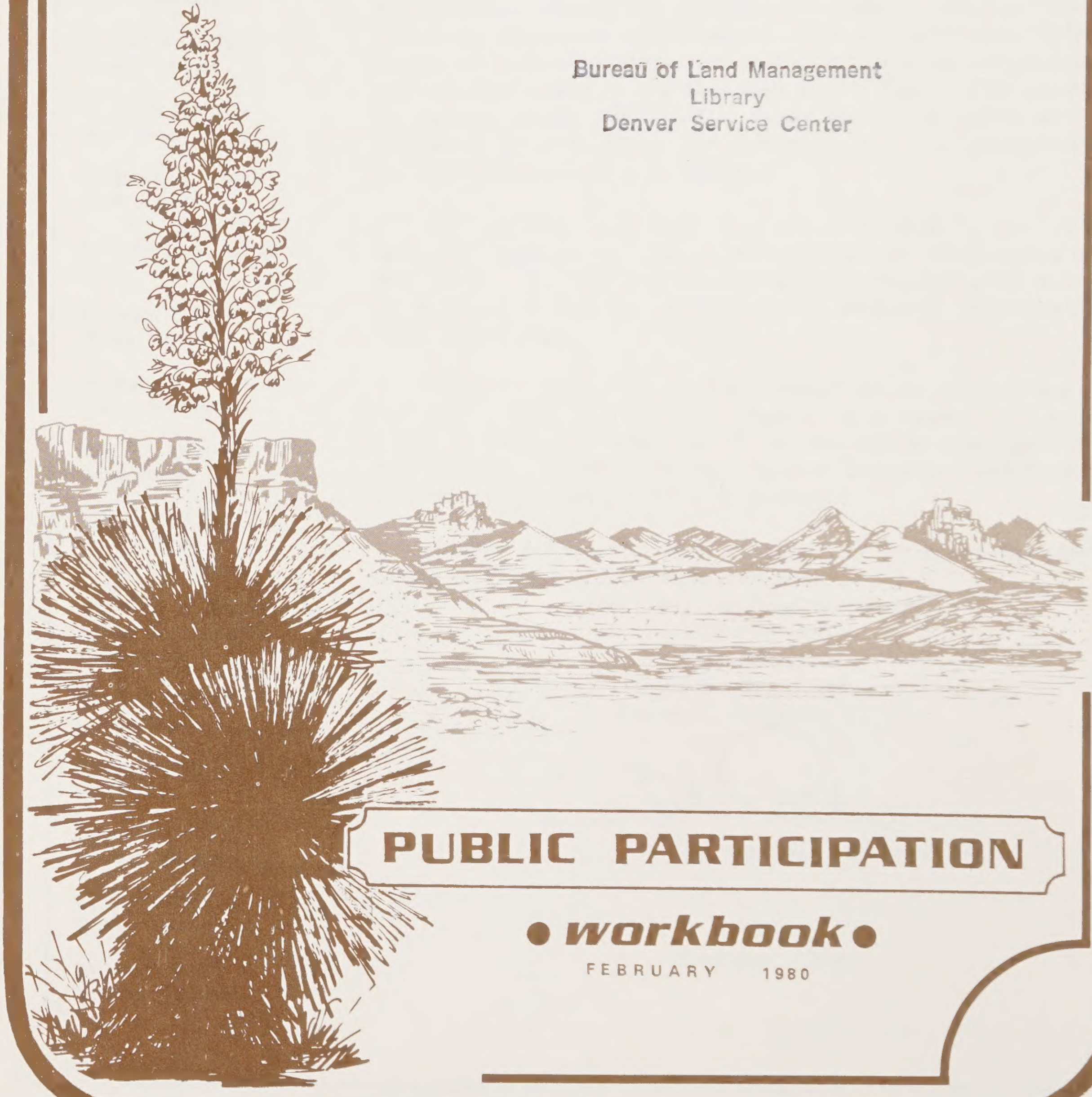

PUBLIC PARTICIPATION

• workbook •

FEBRUARY 1980

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Work-book

**California
Desert
Conservation
Area
ADVISORY
COMMITTEE**

BUREAU OF LAND MANAGEMENT

an invitation to the public:

JAMES W. BURNS
State Government

FRANK W. DeVORE
Energy - Utilities

W. LEON HUNTER
Environmental Science

RICHARD H. JAHNS
Earth Science

LAURENCE W. LANE, Jr.
Public Affairs

E. DEAN LEMON
Mining - Minerals

WILBUR W. MAYHEW
Wildlife Resources

HARVEY PERLOFF
Social Science

WILLIE PINK
General Public
(Native Americans)

CLAYTON A. RECORD, Jr.
Elected General-Purpose
Government

ERNA SCHUILING
General Public

RUTH SIMPSON
Archaeology

RONALD J. SLOAN
Outdoor Recreation

GENNY SMITH
Outdoor Recreation

RICHARD VOGL
Botanical Resources

The California Desert Draft Plan has been over three years in preparartion. During this period a great deal of emphasis has been placed on the use of public input. The fifteen member California Desert Advisory Committee was established to advise on preparation and implementation of the California Desert Plan. This committee has worked closely with BLM to insure that public values have been considered in formulating the alternative plans for management of the public lands set forth in this draft.

Through this workbook you are encouraged to give us your opinions, suggestions, and recommendations on every aspect of the draft plan. By following the format presented here your input will be included in the data which will be evaluated in preparing the Final Desert Plan.

Public meetings will be held throughout the state during April and May, 1980. Testimony taken at these sessions will be made a part of the public input record and will also be considered in our deliberations. Members of the Advisory Committee will be present at these sessions, along with BLM personnel.

Further information may be obtained, or comments given by calling the Bureau of Land Management at:

*(800) 442 - 4946, at no charge
(California only)
or by writing to:
BLM - Box 5555
Riverside, California 92517*

California State Director, BLM

Chairman, CDAC

CALIFORNIA DESERT PLANNING PROGRAM

CALIFORNIA DESERT ADVISORY COMMITTEE • • Established under Sec. 601 (g) (1) in accordance with the provisions of Sec. 309 (a) of the Federal Land Policy and Management Act of 1976, to advise the Secretary of the Department of the Interior with respect to the preparation and implementation of the comprehensive, long-range plan required for the management, use, development, and protection of the public lands within the California Desert Conservation Area.

How public participation will be used to develop the Final Plan and E.I.S.:

Public input will be reviewed and given substantial weight in preparing the final plan. The following steps will be involved in processing public responses to the draft plan:

➤PUBLIC REVIEW PERIOD ○

The draft Desert Plan and Environmental Impact Statement will be available for public review from February 15 through May 15, 1980. During this period public responses will be accepted in many forms. including the written comments (solicited by this workbook), public hearings and meetings, toll free telephone contacts, and field contact with Bureau representatives. All inputs will be considered, regardless of how presented.

➤PUBLIC INPUT EVALUATION ○

All inputs will be evaluated and interpreted, issue by issue, and alternative by alternative.

➤PLAN REVISIONS ○

The BLM Planning Staff will integrate advice of the Advisory Committee with other information and prepare plan adjustment.

➤COMMITTEE REVIEW ○

The Advisory Committee will review planning adjustments to the plan and advise the Bureau on whether or not staff's proposed changes are responsive to public input.

➤FINAL PLAN PREPARATION ○

With full consideration given to all inputs, BLM will prepare a a final plan.

How to comment on the Draft Plan Alternatives and E.I.S.:

The response sheets in this workbook relate to specific components of the Draft Plan Alternatives. Use them, and more sheets if necessary, to make your comments and mail them to:

Desert Plan Staff
P.O. Box 5555
Riverside, California 92517

Comments should be as specific as possible and may address either the merits of the alternatives presented, the adequacy of impact assessment, or both. Whether this workbook or a separate letter is used, it would be helpful for review purposes to indicate page numbers or map references where possible. In regard to EIS comments, the focus should be on the accuracy of facts and the validity of the analysis presented. A separate letter would be preferable for submitting EIS comments. EIS comments will be considered both individually and collectively and responded to in the final statement. Possible responses to comments include:

➊ Modification of the alternatives and use in developing the proposed plan;

➋ Development and evaluation of alternatives not previously given serious consideration;

➌ Supplementing, improvement, or modification of analysis;

➍ Factual corrections; and

➎ Explanation of why any comments are not receiving further response.

Substantive comments or summaries thereof will be attached to and published in the final statement.

The back cover of this workbook may be removed and used as a mailing wrapper to return all your comments. No postage is required. For further information, or to phone in comments, a toll free number will be in operation beginning February 15, 1980. The toll free lines will be attended from 8:00 am - 4:00 pm on weekdays, and are available only within California. The number is:

1 - (800) 442 - 4946

• multiple-use class guidelines •

The Multiple Use Class Guidelines are found on pages 20 to 29.
When writing your comments please identify the multiple use guideline and page number.

Plan Alternatives

The Plan Alternatives are found on pages 30 to 34.
The Plan Alternative Maps are found in the front pocket of the document.
When writing your comments please identify the alternative and/or page number, and/or map reference number. When commenting on the alternative, it would be helpful if you were to identify the alternative which most nearly represents your view for management of the California Desert Conservation Area. If none of the alternatives presented express your view, you could suggest how one of the alternatives could be modified, or suggest a completely new Alternative.

Cultural Resources and Native American Values

The Cultural Resources/Native American Values Element and maps are found on pages 45 to 53.

When writing your comments please identify the alternative, page number, and/or map reference. When commenting on this plan element, it would be helpful if you could identify the alternative which presents the element as you feel it should be. If none of the alternatives presents the element in a manner which expresses your view, you could suggest modification to one of the alternatives or a completely new treatment of the element.

Recreation

The Recreation Element and maps are found on pages 54 to 72.

When writing your comments please identify the alternative, page number, and/or map reference. When commenting on this plan element, it would be helpful if you could identify the alternative which presents the element as you feel it should be. If none of the alternatives presents the element in a manner which expresses your view, you could suggest modification to one of the alternatives or a completely new treatment of the element.

Wilderness

The Wilderness Element and maps are found on pages 73 to 82.

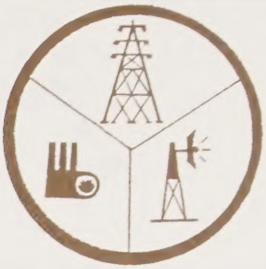
When writing your comments please identify the alternative, page number, and/or map reference. When commenting on this plan element, it would be helpful if you could identify the alternative which presents the element as you feel it should be. If none of the alternatives presents the element in a manner which expresses your view, you could suggest modification to one of the alternatives or a completely new treatment of the element.

Motorized Vehicle Access

The Motorized Vehicle Element and maps are found on pages 83 to 91.

When writing your comments please identify the alternative, page number, and/or map reference. When commenting on this plan element, it would be helpful if you could identify the alternative which presents the element as you feel it should be. If none of the alternatives presents the element in a manner which expresses your view, you could suggest modification to one of the alternatives or a completely new treatment of the element.

Energy Production and Utility Corridors



The Energy Production/Utility Corridors Element and maps are found on pages 92 to 101.

When writing your comments please identify the alternative, page number, and/or map reference. When commenting on this plan element, it would be helpful if you could identify the alternative which presents the element as you feel it should be. If none of the alternatives presents the element in a manner which expresses your view, you could suggest modification to one of the alternatives or a completely new treatment of the element.

Mineral Exploration and Development

The Mineral Exploration and Development Element and maps are found on pages 102 to 111.

When writing your comments please identify the alternative, page number, and/or map reference. When commenting on this plan element, it would be helpful if you could identify the alternative which presents the element as you feel it should be. If none of the alternatives presents the element in a manner which expresses your view, you could suggest modification to one of the alternatives or a completely new treatment of the element.

Livestock Grazing and Wild Horse/Burro

The Livestock Grazing and Wild Horse/Burro Element and maps are found on pages 112 to 128.

When writing your comments please identify the alternative, page number, and/or map reference. When commenting on this plan element, it would be helpful if you could identify the alternative which presents the element as you feel it should be. If none of the alternatives presents the element in a manner which expresses your view, you could suggest modification to one of the alternatives or a completely new treatment of the element.

Wildlife

The Wildlife Element and maps are found on pages 129 to 151.

When writing your comments please identify the alternative, page number, and/or map reference. When commenting on this plan element, it would be helpful if you could identify the alternative which presents the element as you feel it should be. If none of the alternatives presents the element in a manner which expresses your view, you could suggest modification to one of the alternatives or a completely new treatment of the element.

Land Tenure Adjustment

The Land Tenure Adjustment Element and maps are found on pages 152 to 158.

When writing your comments please identify the alternative, page number, and/or map reference. When commenting on this plan element, it would be helpful if you could identify the alternative which presents the element as you feel it should be. If none of the alternatives presents the element in a manner which expresses your view, you could suggest modification to one of the alternatives or a completely new treatment of the element.

Areas of Critical Environmental Concern (A.C.E.C.)

The ACEC Element and table are found on pages 159 to 164.
When writing your comments please identify the alternative and/or page number, and/or table reference number.

implementation

The Implementation Element is found on pages 165 to 170.
When writing your comments please identify the alternative and/or page number.

Use this back page as mailing wrapper. Take any response sheets that you have used for comment and fold in half - - - along with this sheet as a wrapper, staple on open edge and mail. No postage is necessary, but please remember to put your name and return address above mailing label.

Thank you..........

CALIFORNIA DESERT CONSERVATION AREA

Protection Alternative

The "Protection" Alternative favors protection of land and resources, through wilderness and related designations to preserve the desert's plant, wildlife, cultural and historical resources.

Class	Percentage
C	43.0 %
L	49.0
M	4.6
I	1.2
Other	2.2

Approximately 11.8 million acres of public land have been assigned a multiple-use class

Bureau of Land Management
Library
Denver Service Center

– legend –

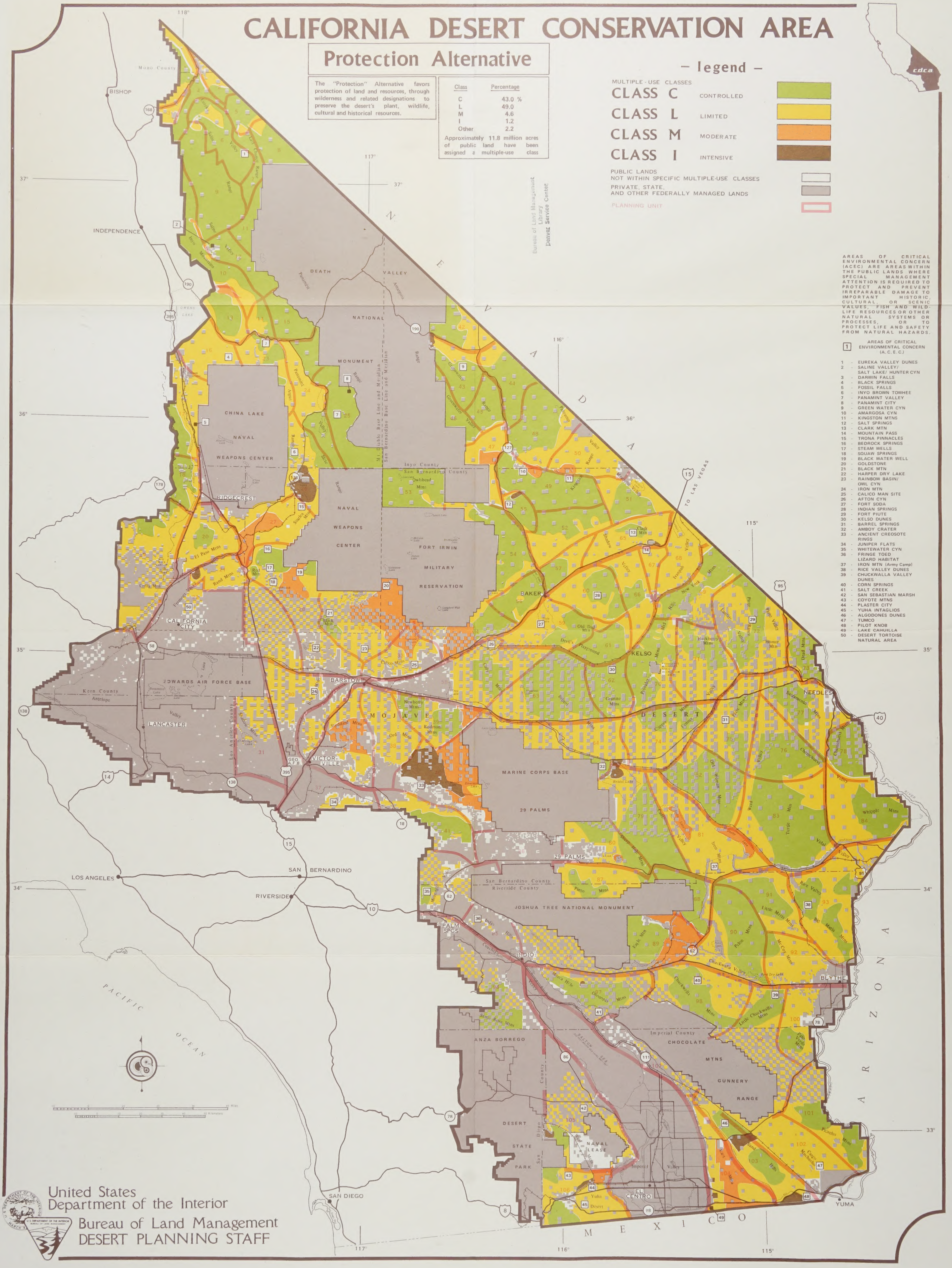
MULTIPLE - USE CLASSES

CLASS C	CONTROLLED	🟩
CLASS L	LIMITED	🟨
CLASS M	MODERATE	🟧
CLASS I	INTENSIVE	🟫
PUBLIC LANDS NOT WITHIN SPECIFIC MULTIPLE-USE CLASSES		☐
PRIVATE, STATE, AND OTHER FEDERALLY MANAGED LANDS		▨
PLANNING UNIT		☐

AREAS OF CRITICAL ENVIRONMENTAL CONCERN (ACEC) ARE AREAS WITHIN THE PUBLIC LANDS WHERE SPECIAL MANAGEMENT ATTENTION IS REQUIRED TO PROTECT AND PREVENT IRREPARABLE DAMAGE TO IMPORTANT HISTORIC, CULTURAL, OR SCENIC VALUES, FISH AND WILDLIFE RESOURCES OR OTHER NATURAL SYSTEMS OR PROCESSES, OR TO PROTECT LIFE AND SAFETY FROM NATURAL HAZARDS.

1 AREAS OF CRITICAL ENVIRONMENTAL CONCERN (A.C.E.C.)

1	EUREKA VALLEY DUNES
2	SALINE VALLEY/ SALT LAKE/ HUNTER CYN
3	DARWIN FALLS
4	BLACK SPRINGS
5	FOSSIL FALLS
6	INYO BROWN TOWHEE
7	PANAMINT VALLEY
8	PANAMINT CITY
9	GREEN WATER CYN
10	AMARGOSA CYN
11	KINGSTON MTNS
12	SALT SPRINGS
13	CLARK MTN
14	MOUNTAIN PASS
15	TRONA PINNACLES
16	BEDROCK SPRINGS
17	STEAM WELLS
18	SQUAW SPRINGS
19	BLACK WATER WELL
20	GOLDSTONE
21	BLACK MTN
22	HARPER DRY LAKE
23	RAINBOW BASIN/ OWL CYN
24	IRON MTN
25	CALICO MAN SITE
26	AFTON CYN
27	FORT SODA
28	INDIAN SPRINGS
29	FORT PIUTE
30	KELSO DUNES
31	BARREL SPRINGS
32	AMBOY CRATER
33	ANCIENT CREOSOTE RINGS
34	JUNIPER FLATS
35	WHITEWATER CYN
36	FRINGE TOED LIZARD HABITAT
37	IRON MTN (Army Camp)
38	RICE VALLEY DUNES
39	CHUCKWALLA VALLEY DUNES
40	CORN SPRINGS
41	SALT CREEK
42	SAN SEBASTIAN MARSH
43	COYOTE MTNS
44	PLASTER CITY
45	YUHA INTAGLIOS
46	ALGODONES DUNES
47	TUMCO
48	PILOT KNOB
49	LAKE CAHUILLA
50	DESERT TORTOISE NATURAL AREA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Mono County
BISHOP
INDEPENDENCE
NEVADA
DEATH VALLEY NATIONAL MONUMENT
CHINA LAKE NAVAL WEAPONS CENTER
NAVAL WEAPONS CENTER
FORT IRWIN MILITARY RESERVATION
Inyo County
San Bernardino County
RIDGECREST
CALIFORNIA CITY
EDWARDS AIR FORCE BASE
Kern County
LANCASTER
BARSTOW
BAKER
KELSO
NEEDLES
MOJAVE DESERT
VICTORVILLE
GEO. A.F.B.
MARINE CORPS BASE 29 PALMS
29 PALMS
San Bernardino County
Riverside County
JOSHUA TREE NATIONAL MONUMENT
PALM SPGS
INDIO
BLYTHE
ANZA BORREGO DESERT STATE PARK
CHOCOLATE MTNS GUNNERY RANGE
Imperial County
NAVAL LEASE
SALTON SEA
EL CENTRO
YUMA
SAN BERNARDINO
LOS ANGELES
RIVERSIDE
SAN DIEGO
PACIFIC OCEAN
MEXICO
ARIZONA
TO LAS VEGAS
Owens Lake
Mt. Diablo Base Line and Meridian
San Bernardino Base Line and Meridian

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CALIFORNIA DESERT CONSERVATION AREA

Balanced Alternative

The "Balanced" Alternative considers the demands and uses that people want, along with management of the desert resources under the principles of multiple-use, sustained yield, and maintenance of environmental quality.

Class	Percentage
C	15.1 %
L	43.4
M	35.7
I	3.4
Other	2.4

Approximately 11.8 million acres of public land have been assigned a multiple-use class

Bureau of Land Management
Library
Denver Service Center

– legend –

MULTIPLE-USE CLASSES

CLASS C	CONTROLLED	🟩
CLASS L	LIMITED	🟨
CLASS M	MODERATE	🟧
CLASS I	INTENSIVE	🟫

PUBLIC LANDS NOT WITHIN SPECIFIC MULTIPLE-USE CLASSES	☐
PRIVATE, STATE, AND OTHER FEDERALLY MANAGED LANDS	▨
PLANNING UNIT	▭

AREAS OF CRITICAL ENVIRONMENTAL CONCERN (ACEC) ARE AREAS WITHIN THE PUBLIC LANDS WHERE SPECIAL MANAGEMENT ATTENTION IS REQUIRED TO PROTECT AND PREVENT IRREPARABLE DAMAGE TO IMPORTANT HISTORIC, CULTURAL, OR SCENIC VALUES, FISH AND WILDLIFE RESOURCES OR OTHER NATURAL SYSTEMS OR PROCESSES, OR TO PROTECT LIFE AND SAFETY FROM NATURAL HAZARDS.

1 AREAS OF CRITICAL ENVIRONMENTAL CONCERN (A.C.E.C.)

1 - EUREKA VALLEY DUNES
2 - SALINE VALLEY/ SALT LAKE/ HUNTER CYN
3 - DARWIN FALLS
4 - BLACK SPRINGS
5 - FOSSIL FALLS
6 - INYO BROWN TOWHEE
7 - PANAMINT VALLEY
8 - PANAMINT CITY
9 - GREEN WATER CYN
10 - AMARGOSA CYN
11 - KINGSTON MTNS
12 - SALT SPRINGS
13 - CLARK MTN
14 - MOUNTAIN PASS
15 - TRONA PINNACLES
16 - BEDROCK SPRINGS
17 - STEAM WELLS
18 - SQUAW SPRINGS
19 - BLACK WATER WELL
20 - GOLDSTONE
21 - BLACK MTN
22 - HARPER DRY LAKE
23 - RAINBOW BASIN/ OWL CYN
24 - IRON MTN
25 - CALICO MAN SITE
26 - AFTON CYN
27 - FORT SODA
28 - INDIAN SPRINGS
29 - FORT PIUTE
30 - KELSO DUNES
31 - BARREL SPRINGS
32 - AMBOY CRATER
33 - ANCIENT CREOSOTE RINGS
34 - JUNIPER FLATS
35 - WHITEWATER CYN
36 - FRINGE TOED LIZARD HABITAT
37 - IRON MTN (Army Camp)
38 - RICE VALLEY DUNES
39 - CHUCKWALLA VALLEY DUNES
40 - CORN SPRINGS
41 - SALT CREEK
42 - SAN SEBASTIAN MARSH
43 - COYOTE MTNS
44 - PLASTER CITY
45 - YUHA INTAGLIOS
46 - ALGODONES DUNES
47 - TUMCO
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49 - LAKE CAHUILLA
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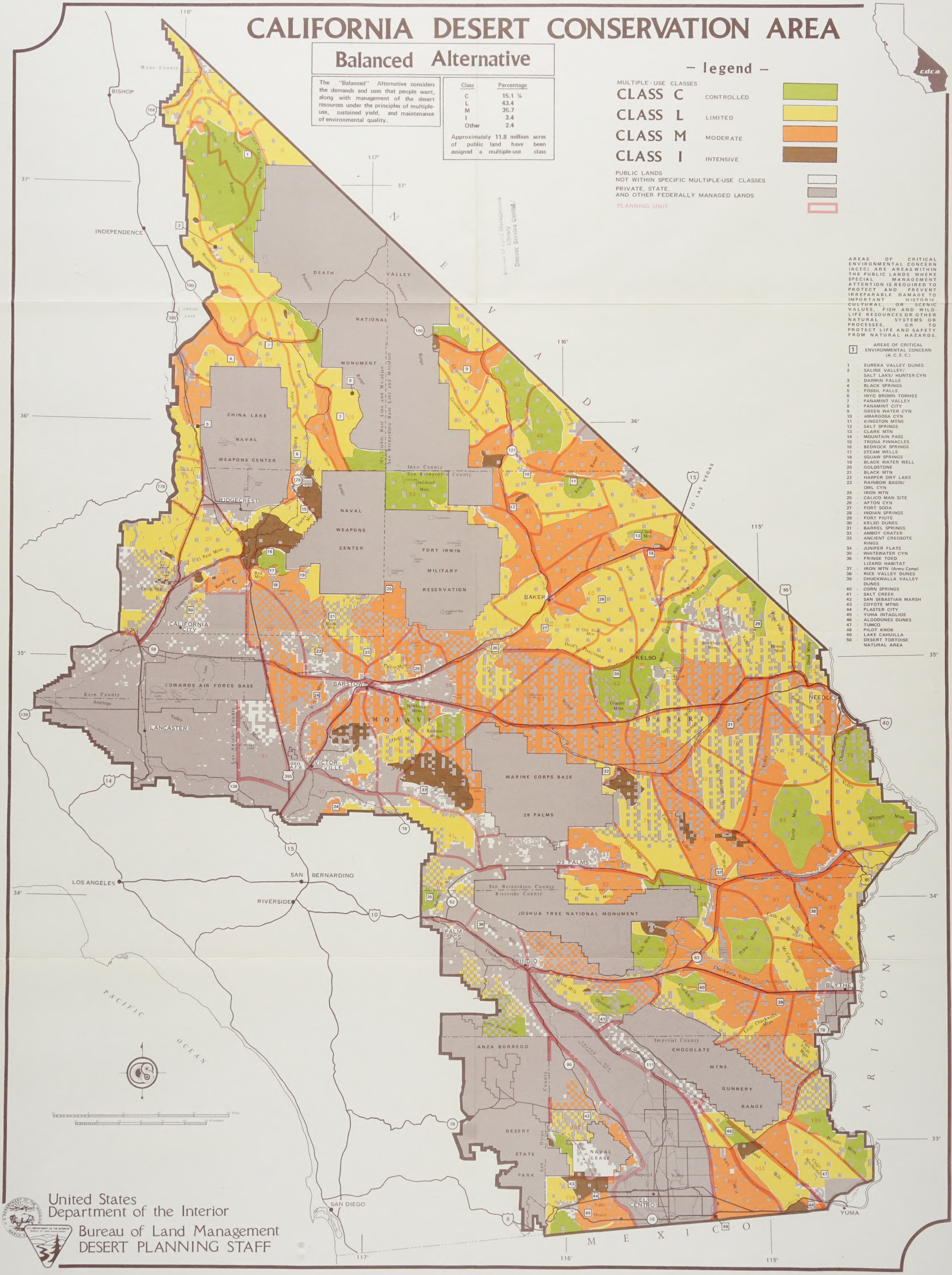
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Mono County
BISHOP
INDEPENDENCE
OWENS LAKE
DEATH VALLEY NATIONAL MONUMENT
N E V A D A
CHINA LAKE NAVAL WEAPONS CENTER
RIDGECREST
NAVAL WEAPONS CENTER
FORT IRWIN MILITARY RESERVATION
Inyo County
San Bernardino County
TO LAS VEGAS
BAKER
KELSO
Devil's Playground
CALIFORNIA CITY
Kern County
EDWARDS AIR FORCE BASE
LANCASTER
Los Angeles County
BARSTOW
M O J A V E
D E S E R T
GEO A.F.B.
VICTORVILLE
MARINE CORPS BASE
29 PALMS
NEEDLES
LOS ANGELES
SAN BERNARDINO
RIVERSIDE
San Bernardino County
Riverside County
JOSHUA TREE NATIONAL MONUMENT
PALM SPGS
INDIO
BLYTHE
Imperial County
CHOCOLATE MTNS GUNNERY RANGE
ANZA BORREGO
DESERT STATE PARK
SALTON SEA
NAVAL LEASE
Imperial Valley
EL CENTRO
YUMA
SAN DIEGO
PACIFIC OCEAN
A R I Z O N A
M E X I C O

United States
Department of the Interior
Bureau of Land Management
DESERT PLANNING STAFF

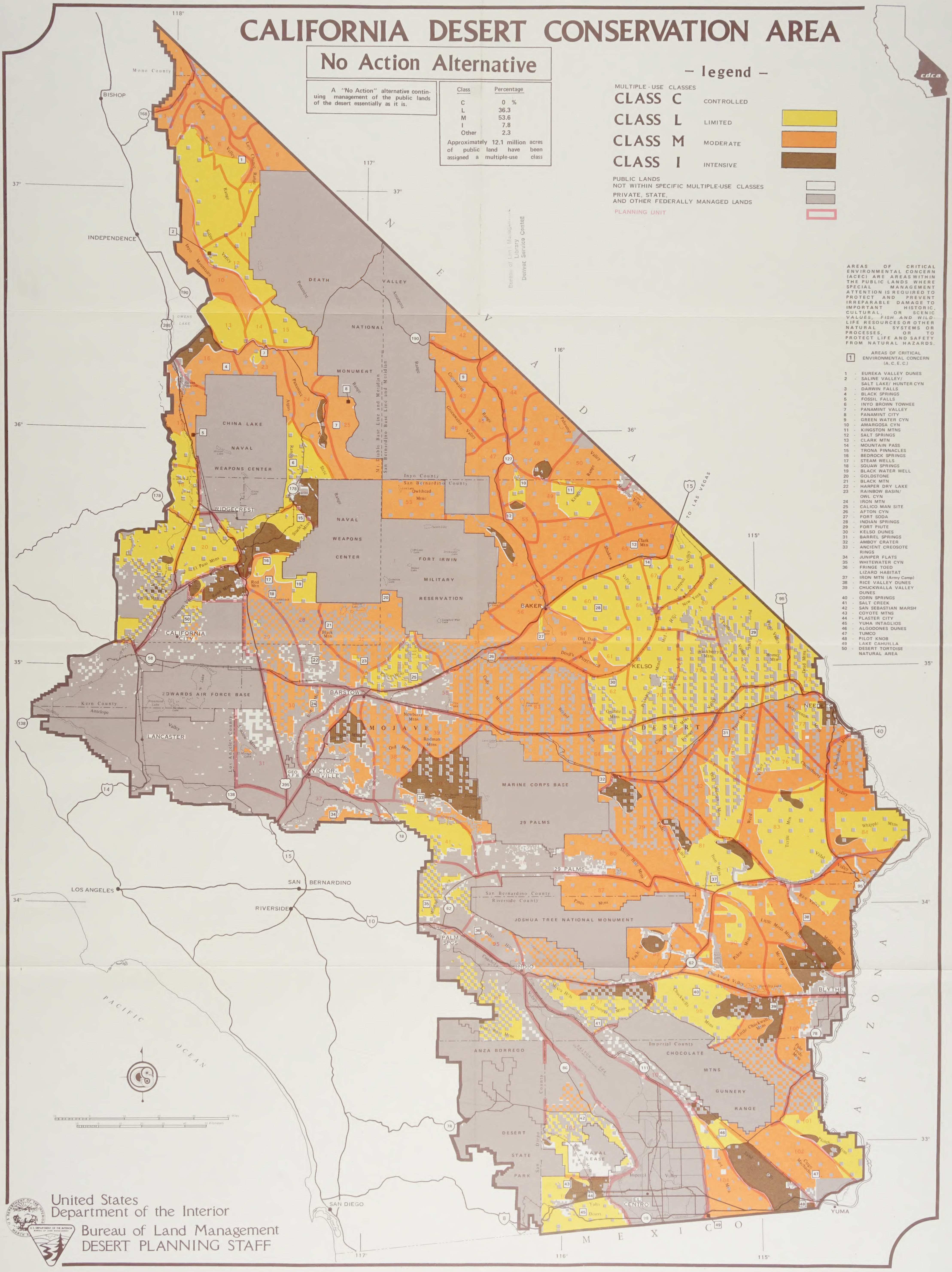
CALIFORNIA DESERT CONSERVATION AREA

No Action Alternative

A "No Action" alternative continuing management of the public lands of the desert essentially as it is.

Class	Percentage
C	0 %
L	36.3
M	53.6
I	7.8
Other	2.3

Approximately 12.1 million acres of public land have been assigned a multiple-use class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EDWARDS AIR FORCE BASE
Kern County
LANCASTER
Los Angeles County
GEO. A.F.B.
VICTORVILLE
BARSTOW
MOJAVE
DESERT
BAKER
KELSO
NEEDLES
MARINE CORPS BASE 29 PALMS
29 PALMS
Inyo County
San Bernardino County
Riverside County
JOSHUA TREE NATIONAL MONUMENT
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CHOCOLATE MTNS GUNNERY RANGE
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RIVERSIDE
NEVADA
ARIZONA
MEXICO
PACIFIC OCEAN
TO LAS VEGAS
Mt. Diablo Base Line and Meridian
San Bernardino Base Line and Meridian
118°
117°
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115°
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36°
35°
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33°

– legend –

MULTIPLE-USE CLASSES

CLASS C	CONTROLLED	🟨
CLASS L	LIMITED	🟨
CLASS M	MODERATE	🟧
CLASS I	INTENSIVE	🟫

PUBLIC LANDS NOT WITHIN SPECIFIC MULTIPLE-USE CLASSES ☐

PRIVATE, STATE, AND OTHER FEDERALLY MANAGED LANDS ▨

PLANNING UNIT ☐

AREAS OF CRITICAL ENVIRONMENTAL CONCERN (ACEC) ARE AREAS WITHIN THE PUBLIC LANDS WHERE SPECIAL MANAGEMENT ATTENTION IS REQUIRED TO PROTECT AND PREVENT IRREPARABLE DAMAGE TO IMPORTANT HISTORIC, CULTURAL, OR SCENIC VALUES, FISH AND WILDLIFE RESOURCES OR OTHER NATURAL SYSTEMS OR PROCESSES, OR TO PROTECT LIFE AND SAFETY FROM NATURAL HAZARDS.

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50 - DESERT TORTOISE NATURAL AREA

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Bureau of Land Management
DESERT PLANNING STAFF

CALIFORNIA DESERT CONSERVATION AREA

Use Alternative

The "Use" Alternative favors use, production, and development, including recreational access and mineral development.

Class	Percentage
C	5.0 %
L	17.0
M	61.6
I	13.9
Other	2.5

Approximately 11.8 million acres of public land have been assigned a multiple-use class

– legend –

MULTIPLE-USE CLASSES

CLASS C	CONTROLLED	🟩
CLASS L	LIMITED	🟨
CLASS M	MODERATE	🟧
CLASS I	INTENSIVE	🟫

PUBLIC LANDS NOT WITHIN SPECIFIC MULTIPLE-USE CLASSES ☐

PRIVATE, STATE, AND OTHER FEDERALLY MANAGED LANDS ▨

PLANNING UNIT ☐

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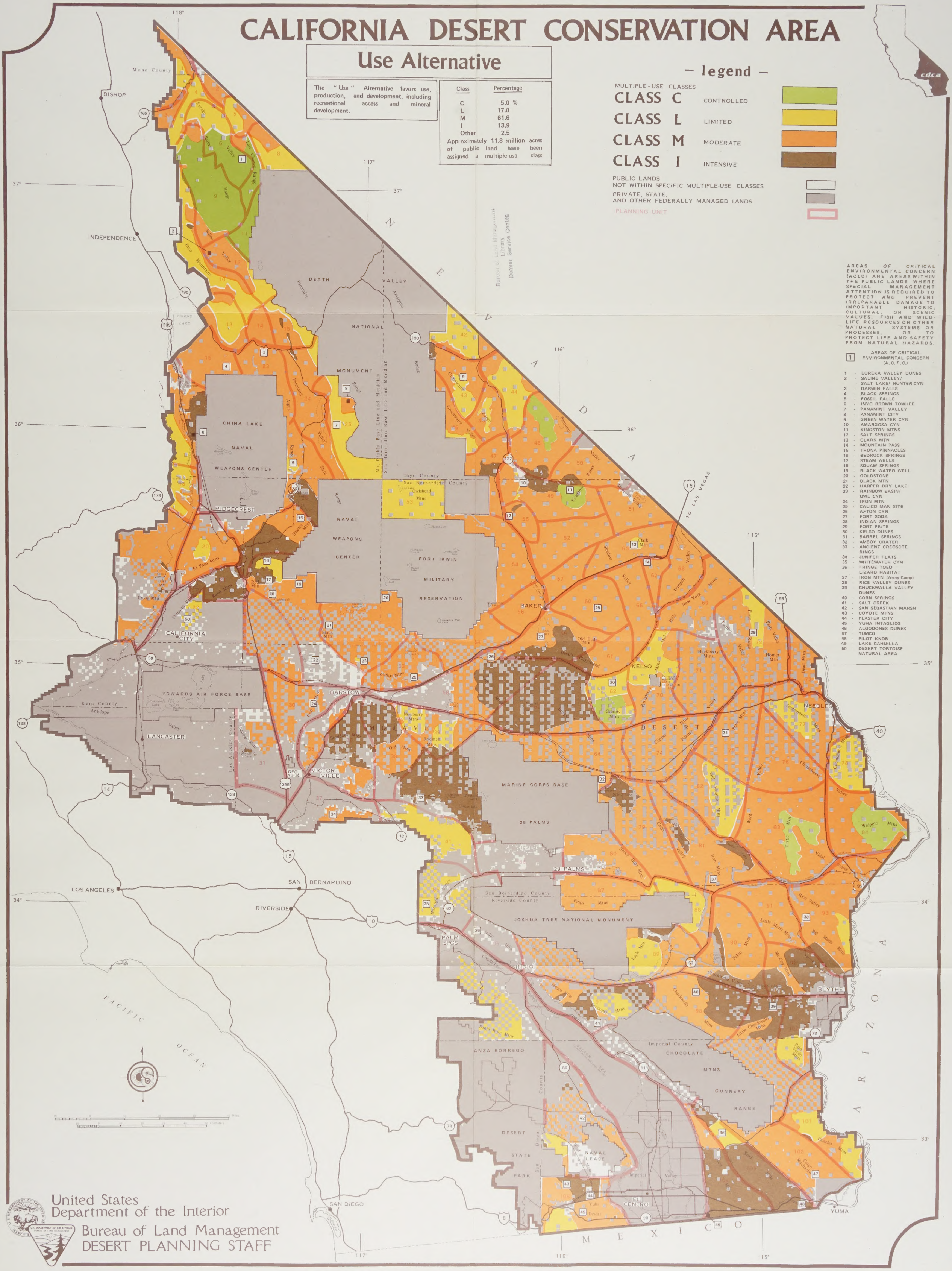
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Saline Valley
Inyo Mountains
Panamint Range
DEATH VALLEY NATIONAL MONUMENT
Amargosa Range
NEVADA
CHINA LAKE NAVAL WEAPONS CENTER
RIDGECREST
Inyo County
San Bernardino County
Owlshead Mtns
NAVAL WEAPONS CENTER
FORT IRWIN MILITARY RESERVATION
Greenwater Range
Pahrump Valley
Kingston Range
Mesquite Valley
Clark Mtn
TO LAS VEGAS
Shadow Valley
Ivanpah Valley
New York Mtns
Piute Valley
BAKER
Old Dad Mtn
Devils Playground
KELSO
Providence Mtns
Granite Mtns
Hackberry Mtn
Homer Mtn
Dead Mtns
NEEDLES
Sacramento Mtns
Chemehuevi Mtns
Whipple Mtns
El Paso Mtns
CALIFORNIA CITY
Fremont Valley
Cross Mtn
Calico Mtns
BARSTOW
Newberry Mtns
Rodman Mtns
MOJAVE DESERT
Black Mtn
Kern County
Antelope Valley
EDWARDS AIR FORCE BASE
LANCASTER
Los Angeles County
VICTORVILLE
GEO AFB
MARINE CORPS BASE 29 PALMS
Bristol Mtns
Cadiz Valley
Turtle Mtns
Vidal Valley
29 PALMS
San Bernardino County
Riverside County
JOSHUA TREE NATIONAL MONUMENT
Pinto Mtns
PALM SPGS
INDIO
Coachella Valley
Chuckwalla Mtns
Little Chuckwalla Mtns
Palen Mtns
McCoy Mtns
Rice Valley
Big Maria Mtns
Little Maria Mtns
BLYTHE
ARIZONA
Mecca Hills
Orocopia Mtns
Santa Rosa Mtns
ANZA BORREGO DESERT STATE PARK
Salton Sea
Imperial County
CHOCOLATE MTNS GUNNERY RANGE
Palo Verde Mtns
Cargo Muchacho Mtns
Imperial Valley
NAVAL LEASE
Yuha Desert
EL CENTRO
YUMA
MEXICO
LOS ANGELES
SAN BERNARDINO
RIVERSIDE
SAN DIEGO
PACIFIC OCEAN

AREAS OF CRITICAL ENVIRONMENTAL CONCERN (ACEC) ARE AREAS WITHIN THE PUBLIC LANDS WHERE SPECIAL MANAGEMENT ATTENTION IS REQUIRED TO PROTECT AND PREVENT IRREPARABLE DAMAGE TO IMPORTANT HISTORIC, CULTURAL, OR SCENIC VALUES, FISH AND WILDLIFE RESOURCES OR OTHER NATURAL SYSTEMS OR PROCESSES, OR TO PROTECT LIFE AND SAFETY FROM NATURAL HAZARDS.

☐1 AREAS OF CRITICAL ENVIRONMENTAL CONCERN (A.C.E.C.)

1 - EUREKA VALLEY DUNES
2 - SALINE VALLEY/ SALT LAKE/ HUNTER CYN
3 - DARWIN FALLS
4 - BLACK SPRINGS
5 - FOSSIL FALLS
6 - INYO BROWN TOWHEE
7 - PANAMINT VALLEY
8 - PANAMINT CITY
9 - GREEN WATER CYN
10 - AMARGOSA CYN
11 - KINGSTON MTNS
12 - SALT SPRINGS
13 - CLARK MTN
14 - MOUNTAIN PASS
15 - TRONA PINNACLES
16 - BEDROCK SPRINGS
17 - STEAM WELLS
18 - SQUAW SPRINGS
19 - BLACK WATER WELL
20 - GOLDSTONE
21 - BLACK MTN
22 - HARPER DRY LAKE
23 - RAINBOW BASIN/ OWL CYN
24 - IRON MTN
25 - CALICO MAN SITE
26 - AFTON CYN
27 - FORT SODA
28 - INDIAN SPRINGS
29 - FORT PIUTE
30 - KELSO DUNES
31 - BARREL SPRINGS
32 - AMBOY CRATER
33 - ANCIENT CREOSOTE RINGS
34 - JUNIPER FLATS
35 - WHITEWATER CYN
36 - FRINGE TOED LIZARD HABITAT
37 - IRON MTN (Army Camp)
38 - RICE VALLEY DUNES
39 - CHUCKWALLA VALLEY DUNES
40 - CORN SPRINGS
41 - SALT CREEK
42 - SAN SEBASTIAN MARSH
43 - COYOTE MTNS
44 - PLASTER CITY
45 - YUHA INTAGLIOS
46 - ALGODONES DUNES
47 - TUMCO
48 - PILOT KNOB
49 - LAKE CAHUILLA
50 - DESERT TORTOISE NATURAL AREA

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Bureau of Land Management
DESERT PLANNING STAFF

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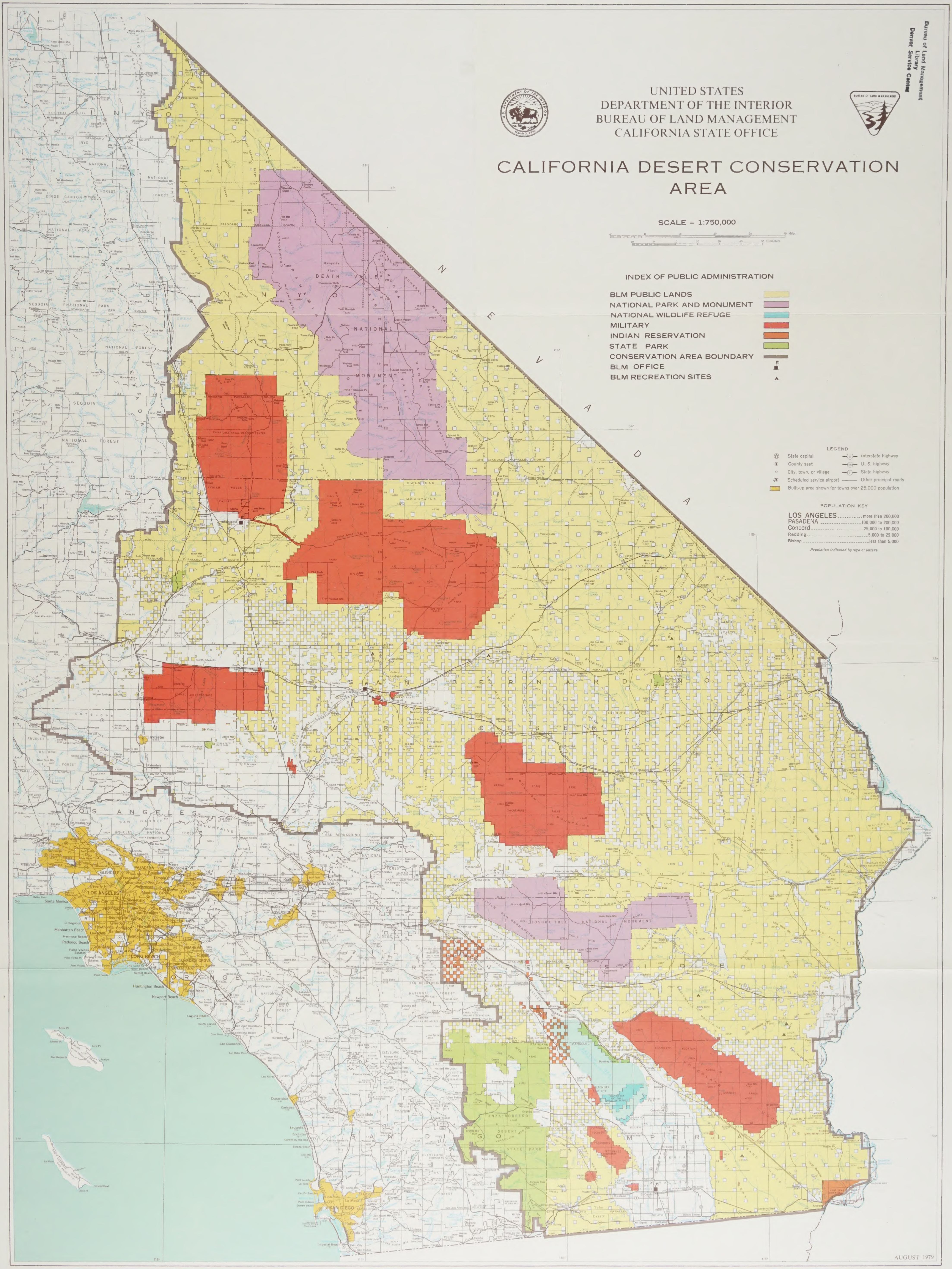
INYO
DEATH VALLEY NATIONAL MONUMENT
NEVADA
SAN BERNARDINO
MOJAVE DESERT
KERN
LOS ANGELES
ORANGE
RIVERSIDE
JOSHUA TREE NATIONAL MONUMENT
SAN DIEGO
IMPERIAL
ANZA-BORREGO DESERT STATE PARK
SEQUOIA NATIONAL FOREST
INYO NATIONAL FOREST
SIERRA NEVADA
Santa Monica
Manhattan Beach
Redondo Beach
LONG BEACH
Huntington Beach
Newport Beach
Oceanside
SAN DIEGO
Lancaster
Palmdale
Barstow
Ridgecrest
Bishop
Blythe
Needles

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
CALIFORNIA STATE OFFICE

CALIFORNIA DESERT CONSERVATION AREA

SCALE = 1:750,000

10 0 10 20 30 40 Miles
10 0 10 20 30 40 50 Kilometers

INDEX OF PUBLIC ADMINISTRATION

BLM PUBLIC LANDS	🟨
NATIONAL PARK AND MONUMENT	🟪
NATIONAL WILDLIFE REFUGE	🟦
MILITARY	🟥
INDIAN RESERVATION	🟧
STATE PARK	🟩
CONSERVATION AREA BOUNDARY	▬
BLM OFFICE	■
BLM RECREATION SITES	▲

LEGEND

⊛	State capital	—(5)—	Interstate highway
◉	County seat	—(101)—	U. S. highway
○	City, town, or village	—(1)—	State highway
✈	Scheduled service airport	——	Other principal roads
🟨	Built-up area shown for towns over 25,000 population		

POPULATION KEY

LOS ANGELES	more than 200,000
PASADENA	100,000 to 200,000
Concord	25,000 to 100,000
Redding	5,000 to 25,000
Bishop	less than 5,000

Population indicated by size of letters

AUGUST 1979

SUMMARY

Draft (X) Final ( ) Environmental Impact Statement

Department of the Interior, Bureau of Land Management

1. Type of Action: Administrative (X) Legislative ( )

2. Brief Description of Action: Section 601 of the Federal Land Policy and Management Act of 1976 established the 25 million-acre California Desert Conservation Area (CDCA) and requires that the Secretary of the Interior prepare and implement a comprehensive, long-range plan for the management, use, development, and protection of the 12.1 million acres of Bureau of Land Management-administered public lands in the CDCA. The Act requires that the plan take into account the principles of multiple use and sustained yield in providing resource use, development, and maintenance of environmental quality, and that the plan be completed and implementation initiated on or before September 30, 1980. The Bureau of Land Management has developed four draft plan alternatives for future management of CDCA public lands in response to the Congressional mandate. The alternative plans are built on a classification of the public lands by geographic area into four multiple use classes with attendant guidelines. The four class designations provide for: intensive use and development; moderate use with competing resource tradeoffs; limited use favoring protection of sensitive resources; and controlled use preserving wilderness values. Areal extent and distribution of these multiple use classes vary significantly between alternatives. More specific management guidance is provided by nine plan elements that prescribe desertwide and localized management direction for: Cultural Resources/Native American Values; Recreation; Wilderness; Motorized Vehicle Access; Energy Production/Utility Corridors; Mineral Exploration and Development; Livestock Grazing/Wild Horse and Burro Management; and Land Tenure Adjustment. These four alternative sets of elements are consistent with the Multiple Use Class designations of each alternative. Finally, 50 Areas of Critical Environmental Concern (ACECs) are proposed. These are common to all alternatives except the No Action Alternative, in which no ACECs are proposed.

3. Summary of Environmental Impacts. All alternatives involve both adverse and beneficial impacts. Sensitive natural and cultural values are subject to the greatest risk of adverse impacts under the No Action and Use Alternatives and increasingly lessened adverse impacts, or progressively beneficial impacts under the Balanced and Protection Alternatives. Consumptive and developmental uses receive the greatest negative impacts because of restrictions under the Protection Alternative, less negative impacts to no significant impacts under the Balanced and No Action Alternatives, and generally low to moderately positive impacts under the Use Alternative. Cumulative impacts projected from all plan actions are moderately negative-to-insignificant on air and water quality, with the exception of the Use Alternative's high negative air quality impact potential. Soil and vegetation receive some highly negative impacts in the No Action and Use Alternatives, moderately negative impacts in other alternatives. Wildlife experiences some significant residual negative impacts under all alternatives except Protection, despite some lessening of declining trends under the Balanced Alternative. Cultural and Native American values receive significant negative impacts under the Use and No Action Alternatives, but positive benefits in the Protection and Balanced Alternatives. Wilderness and visual values receive positive impacts in the Protection Alternative, lesser benefits in the Balanced Alternative and negative impacts under the Use and No Action Alternatives. General recreation is enhanced most by the Balanced Alternative and is negatively impacted to varying degrees in other alternatives due to imbalances in recreational opportunities. Motorized vehicle use is heavily restricted in the Protection Alternative and greatly enhanced by the Use Alternative, while essentially holding its own in the other alternatives. Livestock grazing is most severely impacted under the Protection-No Grazing Subalternative and moderately impacted by reductions in all other action alternatives. Wild horses and burros are impacted moderately through herd reductions in all action alternatives. Only the

Protection Alternative produces negative impacts to socioeconomic values due to its highly restrictive protection measures affecting mineral energy development, as well as its constraints on off-road recreation. At this point BLM can identify no clearly preferred planning alternative, but will develop a proposed plan from among features of all alternatives based on public response to the plan/EIS document, using the Balanced Alternative as a point of departure.

4. Alternatives Considered:

A. No Action
B. Protection-oriented Plan
C. Balanced Plan
D. Use-oriented Plan

5. Comments Are Being Requested From the Following:

See the listing of Federal, State and local entities on pages 422 through 425.

6. Date Draft Statement Made Available to EPA and the Public:

February 15, 1980

March 3, 1849

United States Department of the Interior

BUREAU OF LAND MANAGEMENT

STATE OFFICE
2800 Cottage Way - Room E - 2841
Sacramento, California 95825

February 15, 1980

Dear Reader:

The most important thing about this document is that you are reading it. Because, it is about your land; the Public Land in the California desert which belongs to you and all the people of the United States. And, because it isn't finished yet.

More than a decade ago the idea of a California Desert Plan was formed. By 1976 the need for a land use plan for the desert was compelling enough for Congress to require it. In the *Federal Land Policy and Management Act* of that year the *California Desert Conservation Area* was created and a plan was mandated.

The Bureau of Land Management, the agency you have charged with the stewardship of your Public Lands (including the 12 plus million acres in the California desert) has begun the job. Facts have been gathered and analyzed, meetings have been held and many desert users have been consulted. An outstanding *Citizens Advisory Committee* has been appointed and has been following progress on the plan closely. What you are about to read is the result of those efforts. but, it is not a plan — not yet.

You have here, four plan alternatives representing the possible range of choices for the future, your future and your children's future. You have a draft environmental statement describing probable impacts of those choices. Out of your careful review and thoughtful comments a choice will be made, and the Plan will emerge.

There are many of you, and you do not all think alike, nor agree. We, in BLM, must do our best to serve all of you. If we are to make a good decision, if we are to arrive at a Plan that represents the Public interest, it is up to you, all of you, to help and to understand.

Understand the desert, its fragile beauty and its remarkable wealth. Understand *"Multiple Use"* which includes wildlife as well as energy development, minerals as well as wilderness, cows as well as petroglyphs, solitude, adventure, excitement, challenge, red meat, rare earths, future power, and the prayers of ancient peoples — all of which we all use, depend upon, cherish, and share.

What you write about this draft and these alternatives will be all we have to shape a Plan for the California desert that includes your interests. The success of this document will be measured by the quality of your response.

Sincerely,

James B. Ruch
California State Director
Bureau of Land Management

California Desert Conservation Area

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GENNY SMITH
Outdoor Recreation

RICHARD VOGL
Botanical Resources

* * *

CALIFORNIA DESERT ADVISORY COMMITTEE • • Established under Sec. 601 (g) (1) in accordance with the provisions of Sec. 309 (a) of the Federal Land Policy and Management Act of 1976, to advise the Secretary of the Department of the Interior with respect to the preparation and implementation of the comprehensive, long-range plan required for the management, use, development, and protection of the public lands within the California Desert Conservation Area.

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PART I

introduction

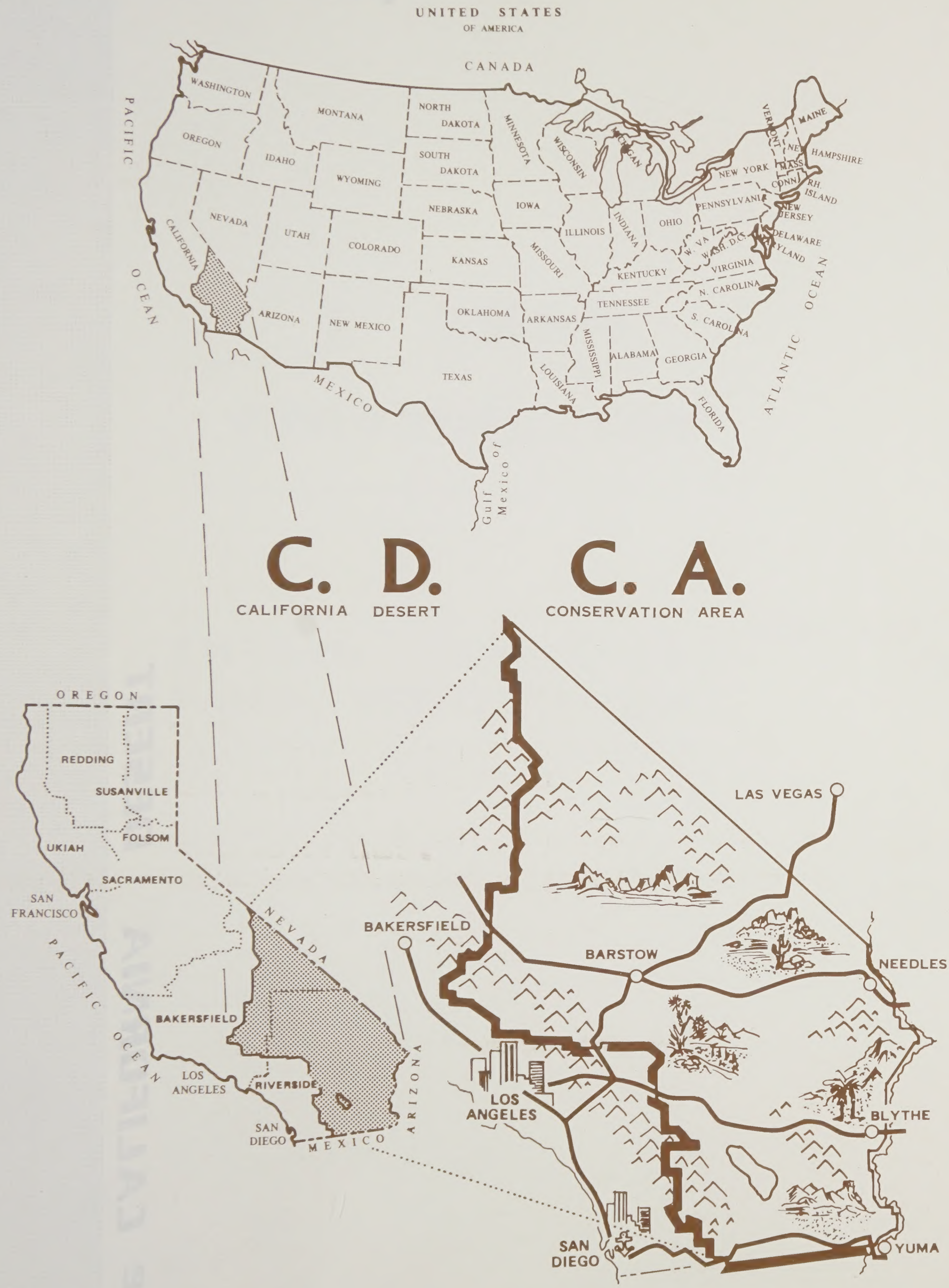
to the CALIFORNIA DESERT CONSERVATION AREA

part I-a

the CALIFORNIA DESERT

C. D. C. A.

CALIFORNIA DESERT CONSERVATION AREA


UNITED STATES
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PACIFIC OCEAN
ATLANTIC OCEAN
MEXICO
Gulf of Mexico
WASHINGTON
OREGON
CALIFORNIA
IDAHO
NEVADA
MONTANA
WYOMING
UTAH
ARIZONA
COLORADO
NEW MEXICO
NORTH DAKOTA
SOUTH DAKOTA
NEBRASKA
KANSAS
OKLAHOMA
TEXAS
MINNESOTA
IOWA
MISSOURI
ARKANSAS
LOUISIANA
WISCONSIN
ILLINOIS
MICHIGAN
INDIANA
KENTUCKY
TENNESSEE
MISSISSIPPI
ALABAMA
OHIO
GEORGIA
FLORIDA
W. VA
WASH. D.C.
VIRGINIA
N. CAROLINA
S. CAROLINA
PENNSYLVANIA
NEW YORK
NEW JERSEY
DELAWARE
MARYLAND
CONN
RH. ISLAND
MASS.
VERMONT
NEW HAMPSHIRE
MAINE
OREGON
REDDING
SUSANVILLE
FOLSOM
UKIAH
SACRAMENTO
SAN FRANCISCO
PACIFIC OCEAN
NEVADA
BAKERSFIELD
LOS ANGELES
RIVERSIDE
SAN DIEGO
MEXICO
ARIZONA
LAS VEGAS
BAKERSFIELD
BARSTOW
NEEDLES
LOS ANGELES
BLYTHE
SAN DIEGO
YUMA

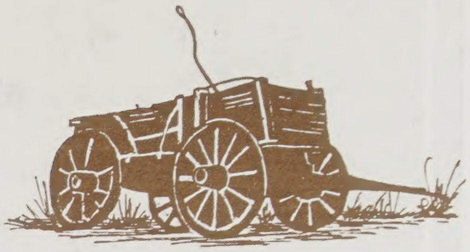
THE CALIFORNIA DESERT

• a perspective •

Protected in the past by its size, climate, and a reputation as a grim and lifeless place, the California desert remains today one of the largest relatively unbroken wild lands in the United States outside Alaska. The pressures of a keen national search for resources and the presence of one in every 20 Americans on its western edge now threaten the vitality of the desert's unique character. While each succeeding generation has left its mark on the California desert in trying to meet its particular needs, the present generation is faced with the choice of giving up some of its demands to satisfy others.

This dilemma results not merely from an increased population with a technological capacity for profoundly influencing the land, but also from a change in the nature and complexity of its values. The brief history of California desert land use which follows reflects both the constant and the evolved needs of the desert's human residents and visitors.

Even the earliest inhabitants of the desert, passive by today's standards, wrought changes in the land. Native Americans, prior to European contact in the mid-16th century, hunted and foraged for food, set down permanent and seasonal village sites, mined and quarried for precious metals and exotic stones, flood-irrigated land for agriculture, and created an elaborate foot trail system for trade. Natural features and processes formed the basis for religious practice. Of these activities, the trail system was of most interest to the Spanish, who viewed the California desert as little more than a daunting obstacle over which travel between settlements in New Mexico and coastal California must occur. With acquisition of the area by the United States in the mid-19th century, the history of continually increasing land use intensity began.



After initial forays through the area by soldiers and Mormon settlers, a growing stream of emigrants bound for coastal California came through the desert, protected by military forts and supplied by outposts along the route. Washington treaty makers and railroad surveyors remained in the region. Fanning out from the trail outposts, miners began creating the colorful desert settlements that went through boom-bust cycles, many lasting less than a decade, until the end of the century. By 1868, with the subduing of the native population, most of the major desert land uses had become entrenched: livestock grazing, mining, military bases, major transportation arteries, and the growth of permanent settlements.

Railroad facilities and mining operations, mainly for precious metals but including the celebrated borax trade, had substantial, although often ephemeral impacts during this period. Livestock grazing took place across a wide expanse of the desert, covering at one time almost its entire western portion.

After the turn of the century the dominance of these activities was challenged when the construction of a canal from the Colorado River transformed what an early Spanish explorer had named "The Land of the Dead" into the Imperial Valley, now one of the most agriculturally productive spots in the country. Anticipating its destiny, the City of Los Angeles brought water across more than 200 miles of desert from the Owens Valley, presaging a number of large water projects to come.

Between the world wars, the free-wheeling days of the prospector waned as corporate entities developed large operations. The reign of the railroads reached a national and local zenith and then faltered as roads were laid across the desert. Highway settlements and resorts sprang up to serve automobile travellers, many of whom had been inspired by authors who described the desert as a beautiful, delicate place. By the 1930s this new sentiment had evolved into legislation creating the desert's three large parks: Anza-Borrego State Park, Joshua Tree National Monument, and Death Valley National Monument, the largest in the coterminous United States. More water projects, such as the massive dams on the Colorado River, were completed, bringing pumping stations and other support facilities, and the first appearance in the desert of the long power transmission lines. With its new interest in flying, the military was lured back to the desert's sun, clear air and sparsely settled landscape.

Military concerns dramatically usurped all other activities in the desert during World War II, as they did elsewhere in the nation. The desert lands, however, experienced more impacts from military operations than elsewhere. Preparing for North African tank warfare, General Patton's troops ranged across vast stretches of the desert landscape, while the Army Air Corps and Navy reserved large tracts of land for training and to test a rapidly evolving weapons technology.

The formation of the modern California desert character began immediately following the war. Attracted by cheap Federal land and the boon of such new technology as air conditioning, refugees from coastal California's urban problems spilled over into the western fringes of the desert. Residential developments took either the closely spaced suburban form of Palm Springs or the urbanphobic arrangements of "jackrabbit homesteads", 20' by 20' shacks dispersed in some areas across hundreds of square miles. The war's legacy of Jeeps and air cooled engines allowed visitors to penetrate the most remote regions of the desert, while auto touring became increasingly popular on improved roads. Mineral operations increased in size, but not generally in number. Livestock grazing became more regulated under the stewardship of the newly formed Bureau of Land Management.

Increasing population and technology has accentuated these trends. The coastal megalopolis, with burgeoning needs for food, minerals, energy, waste disposal, transportation, and communication, reaches into and across the California desert. Overlaid on the desert's landscape are over 100 desert communities with over a half-million people, three major agricultural valleys, large industrial mineral operations, hundreds of thousands of undeveloped residential lots, 9 military bases, 15,000 miles of paved and maintained roads, 11 powerplants, 3,500 miles of high capacity power transmission corridors, 12,000 miles of pipeline, and over 100 communication towers. In the open spaces between these developments, recreationists totaled up 15 million visitor use days in 1977.

The onslaught of human traffic has been accompanied by an amplified government role. The Bureau of Land Management, custodian of twelve million acres of public land, almost half of the total California desert area, was compelled to shed its former stance as a passive and low-key manager and grapple with the problems of this residential and recreational invasion. Its authority and direction was, until 1976, provided by a maze of over 2,000 land use laws, many of them unclear or irrelevant. Responding to this and similar problems in other states, Congress passed the Federal Land Policy and Management Act of 1976 (FLPMA). Section 601 of FLPMA established the 25 million acre California Desert Conservation Area (CDCA), recognizing that:

"...the California Desert contains historical, scenic, archaeological, environmental, biological, cultural, scientific educational, recreational, and economic resources that are uniquely located adjacent to an area of large population;

...the California Desert environment is a total ecosystem that is extremely fragile, easily scarred, and slowly healed;

...the California Desert environment and its resources, including certain rare and endangered species of wildlife, plants, and fishes, and numerous archaeological and historic sites, are seriously threatened by air pollution, inadequate Federal management authority, and pressures of increased use, particularly recreational use, which are certain to intensify because of the rapidly growing population of Southern California;

...the use of all California Desert resources can and should be provided for in a multiple use and sustained yield management plan to conserve these resources for future generations, and to provide present and future use and enjoyment, particularly outdoor recreation uses, including the use, where appropriate, of off-road recreational vehicles..."

To accomplish this, the Congress directed:

"The Secretary ...shall prepare and implement a comprehensive, long-range plan for the management, use, development, and protection of the public lands within the California Desert Conservation Area. Such plan shall take into account the principles of multiple use and sustained yield in providing for resource use and development, including, but not limited to, maintenance of environmental quality, rights-of-way, and mineral development. Such plan shall be completed and implementation thereof initiated on or before September 30, 1980."

part I-b

DOCUMENT OUTLINE

DOCUMENT OUTLINE

The document presented here is the Draft California Desert Conservation Area Plan Alternatives and Environmental Impact Statement. The draft represents a synthesis of data about desert resources gathered by BLM staff and of public information, values and concerns about desert resources and activities. The hundreds of possible land management options for this area have been aggregated into four major plan alternatives for analysis and public review. Three of these respond to public values and the mandate of FLPMA, each representing a different management direction. A fourth alternative represents a continuation of the current management of BLM-administered public lands. While all alternatives are realistic and implementable, none are designated as preferred at this time. BLM will utilize the environmental assessment and public comments to develop a proposed plan built from the best parts of the alternatives proposed in this draft. It will then be publicly presented along with a final EIS prior to making a decision on implementation.

THE DOCUMENT CONTAINS FOUR MAJOR SECTIONS:

part I

INTRODUCTION

Part I - Introduction begins by describing the major public values regarding the California desert, the laws and policies applicable, and the resource inventory and data analysis. Secondly, it explains how the planning process incorporated these values, laws, and resource information to identify issues, develop planning concepts to address these issues, and, finally, create plan alternatives using these concepts. The section concludes with the methods by which the public can review the alternatives and create a final plan.

part II

ALTERNATIVES

Part II - Alternatives presents the concept of each of the four plan alternatives, describing how each addresses the major unresolved conflicts of California desert land use by a different application of specially designed resource management tools. The concept of Multiple Use Class "zoning" is described in terms of the type and levels of use permitted in each class. The zoning concept of the Multiple Use Class is complemented by application of Plan Elements, which focus on major uses and resources. The Area of Critical Environmental Concern concept tailors individual management plans for small, special areas.

part III

IMPLEMENTATION

Part III - Implementation discusses the long-term implementation goals of the final Desert Plan. Standards and procedures are described for coordination with other government agencies, final plan decision and adoption, plan protest process, and monitoring of plan actions. Finally, the plan amendment section describes how individuals, private organizations, BLM, and other government agencies can initiate amendments, and how these will be analyzed and approved or disapproved.

part IV

ENVIRONMENTAL IMPACT STATEMENT

Part IV - Environmental Impact Statement is not in itself the entire Environmental Impact Statement, but combines with the proceding material to constitute the draft Desert Plan and EIS. This section begins with a description the existing social, economic, land use, and natural and cultural resource environment of the CDCA. The impacts of the actions implied by the plan alternatives and their separate components on the resources and uses of this environment are evaluated, both generally and in specific areas of the desert.

B-1 • How to use the CDCA Plan • Alternatives/E.I.S. Document

· The preceeding section describes the four major parts of the total document. Since overall size may appear voluminous and the organization as complex as the lands and resources it addresses, a guide to the user may be useful. Which approach a reader wishes to follow in reviewing the document will depend on one's particular interests. The following guide is organized on this basis:

● FOR AN EXECUTIVE SUMMARY

· Use Part II-B, Plan Alternatives, pages 32-34; the Multiple Use Class Maps for each of the four alternatives in the map pocket, and Part IV-C-1, Cumulative Environmental Impacts, beginning on page 198. These sections give an overview of all plan alternatives, a comparison of major actions to be implemented, and a comparison of attendant cumulative environmental impacts desertwide.

● FOR A MORE IN DEPTH DESERTWIDE UNDERSTANDING OF PLAN ALTERNATIVES

· Add to the sections noted above, a review of Part II-A, Multiple Use Class Guidelines and Conflict Resolution Criteria, pages 22-31.

● FOR INFORMATION ON HOW PLAN ALTERNATIVES TREAT A GIVEN RESOURCE OR ITS USE

· Read the introduction to Part II-C, Plan Elements, on page 50, then go to the Plan Element of interest (e.g., Wilderness, beginning on page 79 or Wildlife beginning on page 135). Maps by alternatives are available in each element section. Areas of Critical Environmental Concern (ACECs) are indicated and numbered on the element maps. More ACEC information on proposed protection measures can be obtained in Part II-D, Areas of Critical Environmental Concern, page 165-170, which concludes with a table indicating management requirements for each of 50 proposed ACECs. Environmental impact assessment of plan elements is presented in Part IV-C-2, Impacts of Plan Elements, beginning on page 224. Consult the Table of Contents for the element of interest. Some of the element impact sections give site specific assessments on ORV open areas, transmission corridors and grazing allotments.

● FOR AN UNDERSTANDING OF THE PLANNING PROCESS USED

· Review Part I-D, Planning Process, found on pages 14-19. It presents issues and conflicts addressed, planning components, and the rationale for plan alternatives considered.

● FOR COMMENT ON THE PLAN ALTERNATIVES AND DRAFT ENVIRONMENTAL IMPACT STATEMENT

· To help shape a final plan proposal for the California desert, consult Part 1-E, Public Participation on pages 20 and 21 as well as the workbook provided in the map pocket. The workbook is simply an optional method to comment on the Plan Alternative/EIS Document. Those wishing to provide in-depth substantive comments will probably want to do so through a letter, structured to best present their critique.

part I·c

PLAN DEVELOPMENT

PLAN DEVELOPMENT

C-1

• public values and perceptions • of the california desert

To determine the goals and objectives of a plan for the California Desert Conservation Area, BLM staff identified basic public interests and concerns in the California desert. A primary participant in this inquiry was the California Desert Advisory Committee, whose 15 members present a broad range of knowledge of desert values and issues. In their role of advising the Secretary of the Interior on all aspects of the development of a California Desert Plan, they provided, among other services, a forum for the public expression of values regarding the use of the California desert. Segments of the public consulted include national, State, and local residents; Federal, State, and local governments with varying levels of involvement with the California desert; and "special" publics, such as business and industry organizations with desert concerns, noncommercial users such as recreational and environmental groups, Native American groups with traditional and religious involvement in the desert, and scientific and educational groups with general and specific interests in desert resources. Besides the Advisory Committee, other public values and concerns were contained in letters addressed to the Advisory Committee and the Bureau of Land Management, national, statewide and desertwide public opinion polls and surveys contracted or conducted by BLM, and position papers submitted by special publics.

The nature of the public values expressed is diverse and complex, as reflected in the many ways the public uses desert resources, ranging from activities protecting a natural feature to those transforming it for consumption. These values and uses are best understood as the result of several different perceptions of what constitutes the primary value of the California desert. These separate perceptions, summarized below, combine with various degrees of emphasis to create the complex set of values by which individuals and groups view these diverse resources.

• THE CALIFORNIA DESERT AS A NATURAL ENVIRONMENT •

The pristine and uniquely evolved features of the desert environment provide satisfaction for both desert residents and visitors. Large majorities of respondents to national (Gallup 1978), statewide (Field 1977), and desertwide (SRI International 1978) polls identified "more protection of wildlife and ecology" and "more protection of scenic qualities and natural character" as their highest priorities for California desert land use management. Although many of these respondents had not visited the California desert and these surveys did not address the implications of such management, these polls reflect a widely held view that natural lands satisfy a basic need in the American character. This aspect of the desert also responds to an aesthetic value held by some—that the desert's wild qualities have an intrinsic value apart from and above human need to use and enjoy them. The desert's natural quality also appeals directly to scientific and educational interests which perceive many parts of the desert as unique and irreplaceable arenas of natural processes. The survival of these is threatened by a number of sources: urbanization, livestock grazing, feral burros and horses, highway and utility related developments, mining, off-road vehicle recreation, collecting and hunting, and, occasionally, ill-conceived scientific and educational uses. Often the nature of this interaction between people and resources is an object of study. Briefly, the major resources which command this interest are:

SOILS:

★

> "Desert soil is finite, extremely slow in forming, and easily destroyed and blown away."

Soils: The California desert, along with other deserts of the earth, is among the few remaining areas which still contain "virgin" soils undisturbed by man. In addition to being an essential ecological component, these soils provide science with "baseline" or untouched natural areas for research which has applications to agriculturally manipulated soils and other soil disturbance impacts. The soils of the CDCA are associated with a number of its landforms. The shallow soils on the steep slopes of upland areas, the soils of dissected alluvial fans which are generally held steadfast by a delicate crust of "desert pavement," and those soils of the low sandy areas often associated with dry lake beds cover about half the California desert area and are highly sensitive to surface disturbance. Vulnerability to compaction and wind or water erosion characterizes most of the desert's soils.

AIR:

> "When I can't see the mountains then I know the air is dirty - and those mountains are only twenty miles away."

Air: The highly valued and increasingly rare occurrence of clear and pure air has suffered from both imported and local polluting agents. Natural wind-blown soil, off-road vehicle use, agricultural activities, mining operations, and other desert activities generate tons of airborne dust. For example, Calexico, in the southern portion of the agri-

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★Quotes are from people who have written or spoken on the development of the Desert Plan.

cultural Imperial Valley, exceeded the State standard for total suspended particulate matter on 356 days in 1977. Also, air quality specialists have recorded the more sinister presence of ozone and other photochemical oxidants, mostly transported by prevailing winds from the Los Angeles Basin; traces of this pollution are found as far away as Death Valley under certain weather conditions. By one standard of measurement of these pollutants, 10 percent of the CDCA has poor air quality, and new desert power plants will have an additional influence.

WATER:

> "Nature has adapted to the limited water the desert provides. Man has adapted by importing and mining water."

Water: Due to the dramatic engineering projects of this century, water is no longer a rare presence in the CDCA, as the lush production of the Imperial, Coachella, and Palo Verde Valleys testifies. Natural, nonimported water sources remain relatively rare. Seeps, springs, and streams have been developed on a small scale to provide water for livestock and wildlife and for some domestic and agricultural use. More significantly, as much as 16 million acres of the CDCA may lie over basins hydrologically and geologically favorable for the collection and storage of water. Some of these basins, or aquifers, have been tapped for agricultural and domestic use.

GEOLOGIC ENVIRONMENT:

> "The visibility of the desert geology - due to its limited vegetation - is probably only outdone by the variety of landforms to be seen."

Geologic Environment. During the last three billion years, a variety of geologic processes have shaped and affected the earth crust in the CDCA. The result of these processes is the complex geologic environment and landscape which we see today. Among the diverse geologic processes was the geologically young volcanism occurring in the Coso Range, and the still active faulting of the San Andreas fault system. Slightly over half of the CDCA is covered with alluvium, or unconsolidated rock material, while the remainder consists of exposed rocks which range in age from older than 600 million years to recent geologic time.

The resulting diversity of minerals, rock types and geologic structural features, combined with sparse vegetation cover which provides good exposure of these features, offer very good geologic educational and research opportunities.

Evidence of prehistoric life has been found enclosed in some of the rocks in the CDCA. Vertebrate and invertebrate fossils are known to exist at several locations throughout the desert, including those in the Barstow and Ricardo geologic formations, which are known to paleontologists throughout the world.

In addition to its scientific value and its contribution to the austere beauty of the desert, the CDCA geologic environment hosts a variety of energy and mineral resources of which many are of local and even world economic importance.

VEGETATION:

> "The creosote bush is the most common shrub in the desert. Growing in clusters known as creosote rings, some have been estimated to be 10,500 years old or a living fossil."

Vegetation: The California desert is actually composed of the western portions of three major desert types, Sonoran, Mojave and Great Basin; the CDCA's vegetation responds to the differing rainfall patterns and temperatures of these deserts. The approximately 2,000 plant species found in the California desert include small trees, shrubs, succulents, and herbs, commonly intermingled to create a number of complex vegetation patterns. Shrubs such as the creosote bush dominate much of the desert landscape. Even this familiar plant displays one of the unusual processes of growth which characterize many desert plants. Aerial photographs reveal that some creosote bushes are arranged in rings. Recent study has indicated that individuals in a ring are clones and appear to have originated from a central point in the ring. As the center of the bush dies, new growth forms at the periphery. The extremely slow rate of ring expansion and the large diameter of several rings observed indicate that some rings may date back to the end of the last ice age when the creosote bush first established itself in the desert - over 10,000 years ago.

The unique structural and physiological adaptations of many desert plants are studied by botanists whose research yields information with such practical application as the development of crop species, weed control, and soil desalinization. A source of food, clothing, and medicine for the aboriginal inhabitants of the desert, some desert vegetation continues to serve modern interests. The harvest of the Mojave yucca to produce shampoo and a large black market activity providing succulents for a worldwide demand for desert plants as ornamentals, only recently controlled by State law, are examples of wide-ranging modern uses. The scenic aspect of desert plants, notably the stunning displays of spring wildflowers, attract thousands of recreationists each year. Desert vegetation also provides forage for domestic livestock, native wildlife and wild horses and burros. When this use is uncontrolled, severe depletion of this resource occurs.

WILDLIFE:

> "Vertebrates are conspicuous and aesthetically pleasing but only make up 10% of the desert animal kingdom. The inconspicuous remainder may play a much larger role in the dynamics of desert communities."

Wildlife: The desert's wildlife is as diverse as the vegetation of the CDCA. Over 100 kinds of habitats, and a number of transitional areas, support an estimated 640 vertebrate species and thousands of invertebrate species. A number of these habitats are rare isolated ecosystems, such as springs, oases and sand dunes. Like islands, each special habitat supports a distinctive animal population. Species range from the Fairy Shrimp which lie dormant in dry lake beds until winter rains create ephemeral ponds, to the isolated bird populations in relict white fir forests on the tops of higher mountain ranges. Species such as the Inyo Brown Towhee, Mojave Chub, and Desert Slender Salamander are unique to the California desert and occur only in limited numbers.

The general picture of wildlife resources since the 1800's is one of gradually increasing deterioration. Species like the jaguar, grizzly bear, wolf and California condor have disappeared from the desert. The Tecopa and Shoshone Pupfish, unique to the California desert, have recently become extinct. Exotic species, such as the burro and numerous species of fish, have become established through the influence of man, generally to the detriment of native species. The decline of species is related directly to habitat quality, which is extremely vulnerable to the human activities mentioned earlier. An obvious measure of this decline can be found in the growing lists of officially listed Rare, Threatened or Endangered species, sensitive species, and those species significant because of decline in populations or loss of habitat. The wildlife aspect of the desert also contributes significantly to its recreational value and to some commercial interests, such as fur trapping.

● THE CALIFORNIA DESERT AS A RECORD OF MAN'S EXISTENCE ●

The desert's varied cultural resources have aesthetic, social, recreational, scientific, and educational value. Native American rock art, the remnants of mines and settlements, emigrant trails and similar features lure thousands of recreationists and amateur historians and archaeologists each year, and many of these resources are an integral part of an active Native American culture. Professional archaeologists and historians value these resources for studying such aspects as the ecological adaptions of man to a natural environment and the settlement patterns of human groups within an ecological or geographical area. The nature of the desert climate has resulted in archaeological and historical sites being unusually well-preserved; over 12,000 sites are known to exist in the CDCA and as many as 100,000 more are surely present, although many fall prey to vandalism, theft, and the inadvertent destruction resulting from increasingly pervasive human activity. These resources encompass almost the entire record of human existence in the desert, from the village sites, quarries, and trails of prehistoric man to General Patton's World War II military camps. Most recorded sites, as many as 90 percent, are prehistoric; many of these are important to anthropological studies of human cultural and social responses to change, which aid in understanding all the cultures who have lived in the desert.

> "The desert is a vast resource of man's history and a part of our heritage. It is therefore an integral part of our lives today and our childrens tomorrow."

● THE CALIFORNIA DESERT AS A HOME and TRADITIONAL WAY OF LIFE ●

> "The land does not belong to anyone. It was a gift from the Creator to the people - and as a gift, must then be respected by all."

The descendants of the earliest inhabitants of the desert, Native Americans, still live there and, despite the effects of a bruising clash with white culture, many continue the practice of ancient cultural and religious traditions. The areas of traditional Native American use are distributed throughout the CDCA, associated with such practices as stone quarrying, salt collection, food and fiber gathering, and hunting. Several archaeological sites, such as petroglyphs and mortuary sites, and natural features such as hot springs and some mountain peaks are sacred to Native Americans and central to rituals such as healing, initiation, mortuary practice, and acquisition of ritual powers and divination. The profound relationship of land to the religious practice of Native Americans results in their view that many land uses of the white culture are acts of desecration in these sensitive areas, and Native Americans ardently resist these intrusions.

> "Without grazing, millions of acres of desert forage would be totally wasted and most of the desert unproductive....this is our home, and our very livelihood depends on a healthy, productive desert."

Among the oldest persisting emigrant American settlements are those related to livestock grazing. The life of the traditional western stockman still has its followers, who now own the approximately 60,000 sheep and 10,000 cattle which obtain all or part of their subsistence from the California desert. Competing uses have diminished the open ranges, although a healthy 4.5 million acres are currently available in 54 grazing allotments, on which the Bureau of Land Management regulates livestock numbers on an annual basis depending on rainfall and vegetation zones. Ranchers display a deep pride in their heritage and way of life, believing that converting desert shrubs and grasses to animal food and fiber is a natural and important use of desert vegetation. They express appreciation for the desert's natural processes, noting that wildlife benefits from livestock water developments and that properly grazed forage renews itself, and may even be enhanced.

The reclusive burro-leading prospector who characterized the early history of the California desert is emulated today by a group as colorful as its forebears. Its numbers vacillate with mineral prices and economic conditions; during the Great Depression, for example, the desert probably supported thousands of soup line refugees, many of whom settled for rabbit meat when their claims came up empty. For some of today's independent miners, the search for minerals is secondary to the pursuit of a life unfettered by urban responsibilities, although the hard labor many put into their claims makes these people sensitive to accusations that they lack commitment to their occupation.

"I like the desert - you got your sun....you got your rocks and sand. I don't know - it just gets in your blood."

Most of the 512,000 people who live in the California desert are apt to express their appreciation for it in terms of its lack of urban problems. Nine out of ten desert residents were not born in the desert, but rather moved there, most often from other locations in southern California. According to a 1978 survey, the reason most often given for moving to the desert was military reassignment or job transfer. Services and trade, primarily associated with tourism and recreation, is the most common desert employment (44.3 percent). This is followed by government employment (12.2 percent), primarily at military installations; transportation, communications and utilities, and mining (8.8 percent), manufacturing (8.5 percent) and agriculture (8 percent), all composing a picture of a less diverse and complex economy than elsewhere in southern California and the state. The second most common reason given for moving to the desert is "medical reason", often relating to the salutary effects of clean, dry air on respiratory ailments. This valued air quality motivates many to strenuously resist local developments and activities which increase air pollution and humidity. Unsurprisingly, eight out of ten desert residents use the desert for recreation, and recreation activities by visitors are perceived to be the most important contributors in the desert economy. Desert residents also support strong measures to protect the desert, although somewhat less so than groups polled nationally and statewide.

● THE CALIFORNIA DESERT AS A PROVIDER OF FOOD, ENERGY, and MINERALS ●

To varying degrees, state, national and international markets list California desert products among their wares. Desert agriculture accounts for 8 percent of the total food production of California, a state which harvests 25 percent of the nation's agricultural products. Wheat, sugar, cotton and citrus fruits are sold on international markets. Feedlot and livestock pastured on harvested field-crop lands account for 24 percent of the value of livestock statewide. The three major agricultural valleys of the desert are all dependent on imported water supplies from sources at their maximum providing capacity; agricultural communities resist the release of these limited supplies to other prospective uses.

"Without minerals - we could not till our soil, build our machines, supply our energy, transport our goods, or maintain any society beyond the most primitive."

Mining in the California desert is an industry of major importance. Excluding gas and oil, the desert yielded 50 percent of the total 1977 dollar value of mineral production in California, the third-ranking state in mineral production. The CDCA produces all of the boron mined in the United States and a major portion of the world's supply, 97 percent of the rare earth minerals mined nationally, 15 percent of the talc, 10 percent of the crude gypsum, and 5 percent of the iron. Forty-four commodities are known to exist in amounts considered significant; 18 are expected to increase in national importance. The large potential for discovery of these and other commodities indicates that the total in-place value of CDCA energy and mineral resources may be several hundred billion dollars. Energy interests are engaged in oil, gas, and geothermal resource exploration; geothermal resources development seems particularly promising in some areas.

Although it is now a considerably subdued version of the activities which gave it root, the mineral industry today espouses the basic value of enterprise which is a vital element of the American character, and the economic well-being which the preservation of that value implies. Noting the current national recognition of limited resources, a growing trade deficit resulting from reliance on foreign minerals and energy, and the contribution of this deficit to domestic inflation, the mining industry cautions against overzealous and misplaced environmental concern. It finds a disadvantage in defending the importance of the mineral resource, which is by nature enclosed and hidden, against the more readily identified features of the biotic environment. Mineral extraction activities may be substantial, but have occurred on only about two-tenths of one percent of all western lands in the 150-year history of mining in this region, and many impacts have disappeared. The mineral industry points out that its continued vitality requires a far-ranging availability of land for exploration activities, activities which have negligible environmental impacts under the constraints of current regulation. Official mineral withdrawals and de facto withdrawals such as national monuments and military reservations have curtailed this availability by 30 percent. Further withdrawals and restrictions would make the process of finding mineral resources even more difficult and economically unattractive.

THE CALIFORNIA DESERT AS AN OPEN SPACE

The vast open areas of the desert are perceived to be both desirable resources and obstacles to other resources. The perception of the desert as an obstacle of distance and terrain was the primary one for Spanish explorers and early American settlers. Today, military operations, contending with the speed and long distance capability of modern weaponry, value the spaciousness of their preserves, and often even find them constricting as other activities increase on their borders. Low level air corridors crisscross the desert, connecting the restricted air spaces which cover a large percentage of the desert. National training and research and development needs have only increased the military's requirement for open space.

> "Public pressure makes it impossible to build new plants where energy is consumed, yet consumption is still increasing and the desert will be used if we are going to provide the energy demanded."

With acute waste disposal problems, the nearby metropolitan areas eye the desert's open spaces covetously. They presently share in the use of the desert's air resources by 11 power generation plants operating there. Currently under additional review are 13 potential new power plant sites, of which five to ten will probably proceed with construction, based on forecasts of southern California power needs for the next 20 years. Utility companies contend that strict air pollution standards and land-use restrictions preclude siting major new generating plants in the Los Angeles Basin, leaving the desert, despite its relatively clean air and scarce water supplies, as the only feasible area left in the State for this development.

For urban power needs, the desert spaces are most often an obstacle to be engineered through to reach resources in the desert and other states. Power transmission lines exceeding 91 kilovolt capacity use 3,500 miles of corridors to bring power from within the desert and from plants in Utah, Nevada, Arizona, and New Mexico. In addition, several thousand miles of highways, water aqueducts, and oil and gas pipelines cross the desert to feed and fuel the city. In their proposals for new transmission facilities, utility companies warn of the increased costs involved in rerouting lines in deference to scenery and other natural features.

> "Open space is a special quality of the desert. Peace and quiet are in the mind of the beholder. The desert provides a variety of opportunities to experience this because of it's space."
>
> "The activities we do in the desert can only take place in the desert. Where else can we find open space? Not at the ocean beaches or in the mountains."

The open space quality of the desert is a major component of the unique scenic quality of the desert, as well as of a number of recreational activities. Open space is a basic requirement for activities as soaring, target shooting, hang gliding, sand sailing, and, using the obstacle nature of the desert as a resource, recreationists who challenge terrain and distance on motorcycles, dune buggies, and four-wheel drive vehicles.

THE CALIFORNIA DESERT AS A PLAYGROUND and AN ESCAPE FROM CIVILIZATION

The Desert's natural environment, cultural resources, scenic qualities, and open spaces combine to attract annually millions of visitors with a wide range of recreational ambitions. Recreational visitors to or passing through the CDCA spent approximately 325 million dollars in desert communities in 1977. About 3 percent of this total, 10 million dollars, can be attributed to recreationists using BLM-administered public lands.

Individually or as part of a group, recreationists seek such satisfactions as reaffirming family ties; enjoying the camaraderie of friends; appreciating the desert's naturalness; competing in formal or informal events, typically with motorized vehicles; acquiring rock specimens; studying the historical, anthropological, biological, and geological features of the desert; roaming in the anticipation of discovery; or seeking the rare sensation of solitude.

> "I feel that vehicle use on the California desert is on the 'Threatened list' and moving to the 'Endangered list' -."

Studies of recreational use on desert land show that the emphasis of about 80 percent of primary recreational use is on the natural and cultural environment, including such activities as sightseeing, driving for pleasure on roads, camping, hiking, backpacking, painting, photography, education and research, nature study, birdwatching, picnicking and horseback riding. The primary emphasis of about 11 percent of total recreational activity on BLM lands is on the use of vehicles as an end in itself. Vehicle enthusiasts enjoy the performance of their machinery and challenging their skill on desert spaces and terrain, often competing with other vehicles. The desert is also a rich source of material for rockhounds and hobby prospectors; hunters of quail, dove, chukar and other game; and, unfortunately, the illegal collectors of Native American rock art, arrowheads, and other artifacts. Spatial-oriented activities, mentioned in the section above, are pursued on the desert's dry lake beds, bajadas, and mountains.

"My family and I drive responsibly and believe in protecting nature while we are sharing public land with others."

With 15 million visitor use days annually recently recorded, it is not surprising that elbows and sensitivities often rub as visitors run afoul of each other, desert residents and the law. The quality of the natural and cultural environment which is the focus of most of the recreational activity correlates directly to the quality of the recreational experience, and perceptions of what comprises that quality often differ. The motorized vehicle is, to some extent, necessary for all desert recreational activities; the point at which the function of the motorized vehicle ends often defines the different values of the desert recreationists. The desert's large distances, remoteness, scarcity of water, extreme temperatures, and other natural hazards make the vehicle, for many, an essential survival tool from which no one should venture more than a few miles. For others, the motorized vehicle is the epitome of the noisy and mechanized civilization from which they seek a temporary escape, to be abandoned as soon as possible. Whatever his attitude towards the vehicle, the desert recreationist values the desert's wild qualities very highly, often considering even the development of a recreational campground as an intrusion on these qualities. The prospect of designating some of these wild lands as wilderness areas, according to the provisions of the Wilderness Act of 1964, arouses conflicting emotions not only among recreationists, but among all users of the desert.

● THE CALIFORNIA DESERT AS A PUBLIC RESOURCE ●

Various Federal, State, and local governments administer slightly over 75 percent of the CDCA (see map inserted in front packet). This acreage is much more easily defined than the maze of often overlapping jurisdictional responsibilities of the agencies which regulate actions influencing the desert. The quality of air over many parts of the CDCA, for example, is related to the regulation of polluting agents in the Los Angeles Basin by the State of California Air Resources Board.

The Federal government, however, has had primary influence on and responsibility for the land use of the California desert. The evidence of the U.S. Government's accommodation of the overriding national priorities and instincts of the various eras of American history is apparent throughout the desert. The broad swath of checkerboarded lands across the central portion of the CDCA testifies to the concerns of the railroad-building age. The development of the agricultural valleys, and, to a great extent, the size of the coastal metropolitan area are a result of the federally sponsored engineering of water resources. Military bases, national monuments, Indian Reservations, and abandoned homesteads contribute to a confusing legacy of land use policy in the CDCA.

The Bureau of Land Management, which administers about half the lands of the CDCA, has greatly changed its scope and effect during its relatively short history. Formed in 1946 from the General Land Office and the Grazing Service, it performed for years a role as a low key caretaker of the public domain lands leftover from apportionments to the Forest Service, and National Park Service, and other land management agencies. Unlike most of these agencies, the BLM administers a complex land program with several purposes. Among its duties are maintaining public land records; survey and resurvey of public lands; the administration of mineral leasing programs on its lands and other lands held by Federal agencies; the development of recreation and the protection of cultural resources on the public lands; responsibility for the management of range lands, watershed, wildlife, wild horses and burros; fire protection on the public lands; disposal of land under its jurisdiction and of public domain land held by other Federal agencies; and responsibility for land exchanges involving the public domain and for the granting of rights-of-way across Federal lands for the construction of pipelines, electric transmission, and other utilities.

The Bureau has lacked, until recently, a clear statement of policy and modern legislative mandate for assessing the changing priorities of national, State and local concern for the management of resources under its jurisdiction. Management direction for resolving disputes between local users, local and state concerns, and regional and national interests has been gleaned haphazardly from among thousands of land use policies. Authority and direction was clarified by the passage of the Federal Land Policy and Management Act of 1976.

Laws and Policies

C-2

The planning process for the California Desert Plan and Environmental Impact Statement occurs against a backdrop of many land use laws and policies which vary in their scope and application to the issues of CDCA land management. These laws and policies are given a focus and clarity by the Federal Land Policy and Management Act of 1976.

Section 601 of FLPMA requires BLM to:

..."provide for the immediate and future protection and administration of the public lands in the California Desert within the framework of a program of multiple use and sustained yield, and the maintenance of environmental quality."

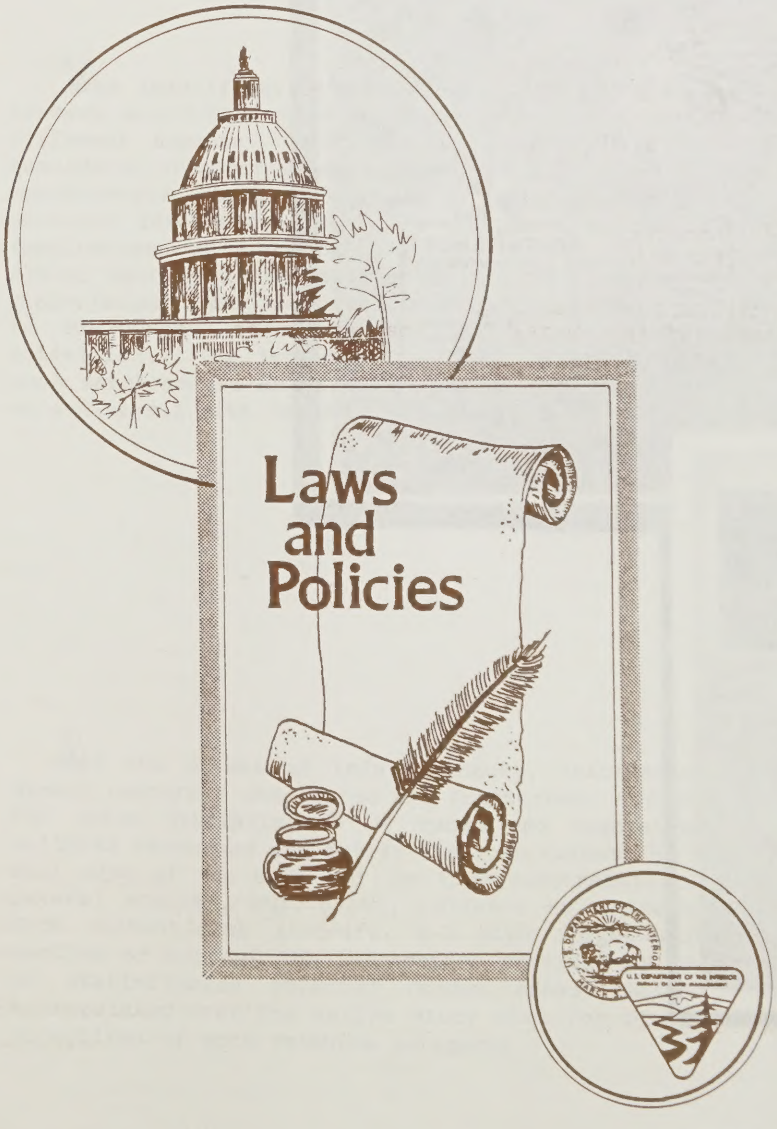
Further guidance is established by Section 101 of the National Environmental Policy Act of 1969.

MULTIPLE - USE

Multiple Use is a concept of management of public lands and their various resource values which directs that they be utilized in the combination that will best meet the present and future needs of the American people. It also calls for the most judicious use of the land for some or all of these resources or related services over areas large enough to provide sufficient latitude for periodic adjustments in use to conform to changing needs and conditions.

SUSTAINED YIELD

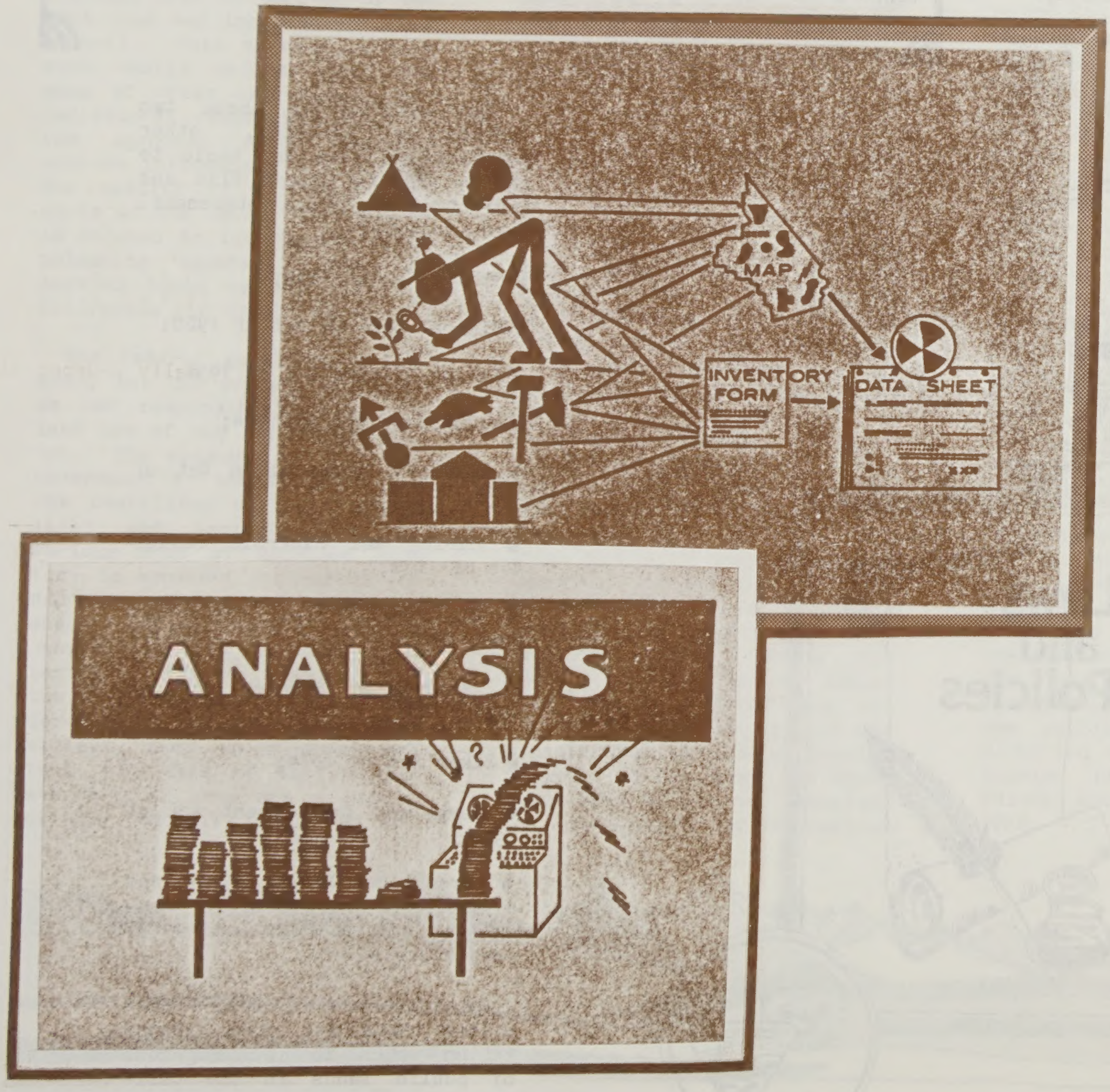
Sustained Yield means the achievement and maintenance in perpetuity of a high-level amount or regular periodic output of the various renewable resources of the land consistent with multiple use.



In addition to these two legislative mandates, other policies and laws are basic to the California Desert Plan and Environmental Impact Statement. These include:

- Mining Law of 1872;
- Mineral Leasing Act of 1920;
- Taylor Grazing Act of 1934;
- Wilderness Act of 1964;
- Historic Preservation Act of 1966;
- Mining and Minerals Policy Act of 1970;
- Wild Free-Roaming Horse and Burro Act of 1971;
- Endangered Species Act of 1973;
- Sikes Act of 1974;
- Rangeland Improvement Act of 1978;
- Executive Orders 11644 and 11989 (Off-Road Vehicle Management - issued 1972 and 1977, respectively).

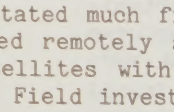
Appendix 1 briefly describes these and other legislation which direct management of public lands in the California Desert Conservation Area.


MAP
INVENTORY FORM
DATA SHEET
ANALYSIS

Inventory and Analysis
C-3

Preparation of the Draft California Desert Plan/EIS required much study of the nature of uses and resources in the desert. Although small and scattered studies for limited purposes had focused on some individual features of the California desert, information about the nature, location, and abundance of many activities and resources was lacking, and the entire California desert had never been comprehensively inventoried and analyzed as an entity. Existing literature did provide a base from which investigation of this immense areas could proceed. A complete inventory and analysis of desert resources and uses is impossible. In many cases, study of the desert by BLM staff and contracted researchers revealed a greater extent and complexity of the resource than had been previously known and, thus, the need for further research. Much of the analysis of gathered information is ongoing; completion of some projects will occur simultaneously with the public review of the draft plan. The results of the resource analysis and of the consideration of public input will be incorporated into the final plan.

The identification of public values described earlier was part of a larger scrutiny of the nature of present and future demand on CDCA resources. The nature of desert land use was examined from a number of different aspects. Studies were made of the planning components of local and county general plans which considered transportation, recreation, public facilities, conservation, and other land uses of the CDCA. A comprehensive land use map of present ownership and administration was constructed. Contracted studies provided information about the historic, present, and projected land use in the desert. These included examinations of such socioeconomic factors as the present and future population of the desert, region, and State; sources of income and employment in these areas, and trends in future second home and recreational property purchase and development in the CDCA. Research was conducted on the economic and social importance to the desert of mining, education and research, livestock grazing, military operations, and other activities. The implications of expected future technology on these activitise was explored, considering such developments as solar energy production, proposed agricultural development, and the use of the desert as a disposal site for toxic wastes.



At the outset of this inventory, information about the nature, location, and abundance of California desert resources was sparse and fragmented. Often innovative inventory and analysis projects were designed for seven disciplines: 1) range and vegetation; 2) recreation; 3) geology, energy, and minerals; 4) cultural resources and Native American values; 5) soil, air, and water; 6) wildlife; and 7) wilderness. The vast size of the CDCA and the time constraints of plan completion dictated much field work, contracting of several studies, and, often, reliance on a technique which intergrated remotely sensed and recorded data from conventional aircraft, U-2 high flight aircraft, and NASA satellites with field investigations to confirm or correct the information provided by these remote sensors. Field investigation of unusual areas or statistically selected random areas yielded "high-confidence" data. Much of this data can be extrapolated over the entire study area for final research and analysis. Briefly, some of the methods and objectives of each resource category:

1 VEGETATION

Vegetation: The approximately 150 habitat types and over 2,000 plant species which are known to exist in the CDCA have been subjected to a number of studies. These include the measurement of the parameters within which desert vegetation grows and reproduces successfully, as well as its response to impacts from vehicle use, grazing, and other activities; a description of vegetation aspects prior to human settlement; and the completion of a capsulized life history profile of each plant classification in the CDCA, with specific information on all known Rare, Threatened, or Endangered species.

2 RECREATION

Recreation: Scenic quality, a primary resource of CDCA recreation, has been assessed for the presence of visual quality, sensitivity to degradation, and exposure to view by the public. Recreational activities have been examined through such studies as onsite surveys of general and individual aspects of recreational use, review of existing recreation literature, contacts with public agencies and private outdoor recreation suppliers, and consultant studies in a number of areas. Much information about California desert recreation use has resulted, including the history of desert recreation, psycho-social needs of users; polls about recreational values from national, statewide and desertwide groups; the nature and volume of teaching and research; the identification of sites and qualities of recreational experience they yield; and the development of a carrying capacity methodology for recreational planning.

3 GEOLOGY - ENERGY - MINERALS

Geology-Energy-Minerals: Various aspects of the varied geologic environment have been assessed, including the educational and research opportunities of studying such features as geologic processes and vertebrate and invertebrate fossil remains. Analysis of existing data and the collection of new data used such methods as a lineament and a geostatistical survey, and aerial magnetometer and gamma ray spectrometer surveys to identify anomalies. Coordination with the U.S. Geological Survey has yielded information identifying the potential in various areas of the CDCA for development of leasable resources, including oil, gas and geothermal. Inventory also included field studies, geochemical surveys, and LANDSAT enhancement studies.

4 CULTURAL RESOURCES

Cultural Resources: Field investigation of selected tracts, archival research of historic documents, and interviews with Native American group representatives have been conducted. Over 12,000 sites have been recorded, including such evidence of human activity as structures, artifacts, objects, ruins, works of art, architecture, and natural features of importance to human historic or prehistoric events. Sensitive areas important to Native American religious and traditional practices have been located. Systematic low-intensity inventories have projected the existence of as many as 100,000 cultural resource sites in the CDCA.

5 SOIL - AIR - WATER

Soil-Air-Water: Studies have been conducted using LANDSAT imagery and field investigations of soil and landform types. Soil compaction, its susceptibility to wind erosion, and impacts of human activities on this resource have been studied through BLM field investigations and contracts. Other studies include research on the presence in the desert of valley fever fungus, a soil organism which causes a respiratory disease.

The Water Resources Division of the USGS studied and delineated drainage and ground water basins and plotted all water sources which are currently monitored for volume and quality. Various aspects of surface water and imported water have been studied and areas of potential flood hazards have been located.

Air quality inventories have been directed to two major areas: 1) air pollution, and 2) fugitive dust and sand storms. Studies conducted have such goals as the development of a CDCA climatology and air pollution potential and the creation of a methodology to monitor the air quality impact of off-road vehicle activities.

6 WILDLIFE

Wildlife: Innovative inventory and analysis techniques were developed and executed by BLM wildlife biology staff. Some involved species never previously inventoried in the California desert.

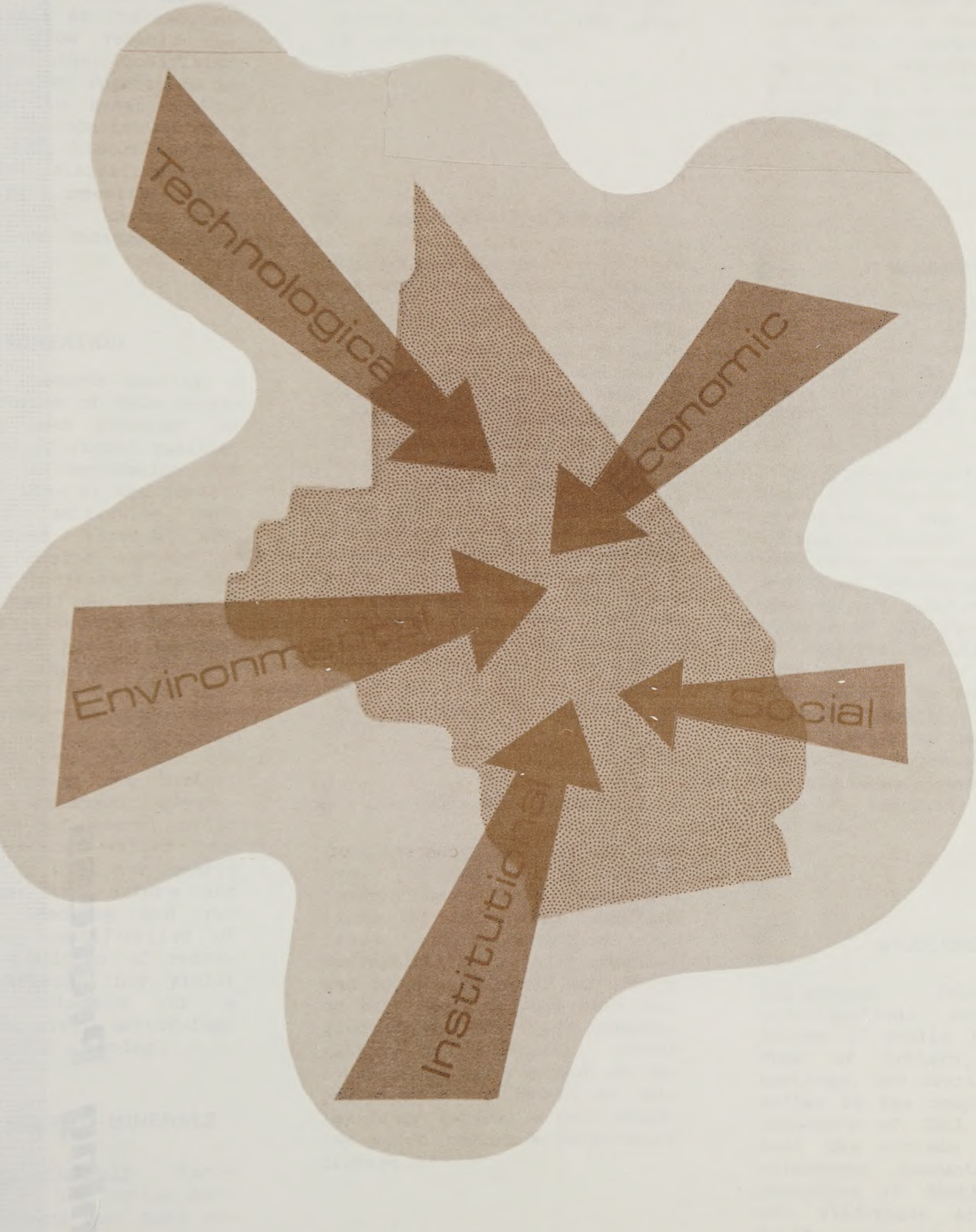
Inventory projects focused in four bsic subjects: 1) gathering existing data in the form of museum records, signed observations, and compilations of annotated bibliographies on key species and habitats; 2) field surveys of significant species, 3) analysis of wildlife habitats by type and conditions, with emphasis on Threatened and Endangered species, and 4) special studies on the effects of recreation, urbanization, livestock grazing, and other land uses on wildlife species and habitats.

7 WILDERNESS

Wilderness: Extensive field investigations and a large volume of public input in the form of letters, workshops, meetings, and hearings have resulted in the completion of an inventory of CDCA lands which meet the minimum criteria of wilderness characteristics as presented in Section 2(c) of the Wilderness Act of 1964. Public review of procedures and results occurred throughout the inventory process and the results of a formal review on the Final Inventory Map have identified the study areas from which the final California Desert Plan/EIS will select to recommend to Congress for official wilderness designation.

part I-d

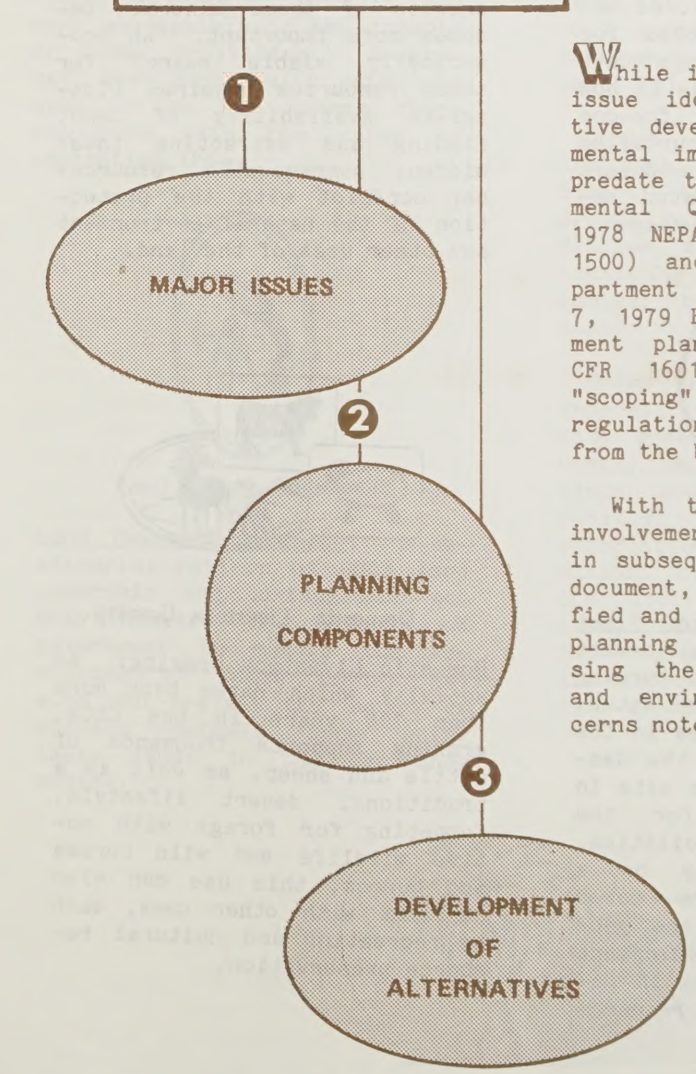
Planning Process


Technological
Economic
Environmental
Social
Institutional

PLAN CONSTRUCTION

ISSUES, TOOLS, and ALTERNATIVES

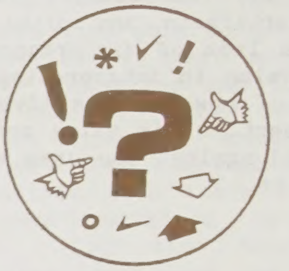
From the base of information described in the preceding section, BLM staff developed land use plan alternatives for all CDCA land administered by the Bureau of Land Management. The construction of these alternatives proceeded according to these steps: 1) the identification of major land use issues on CDCA lands and public stances on these issues, 2) the development of planning and management tools which could resolve these issues, and 3) the construction of workable alternative plans which address the range of identified public interests and concerns.



SCOPING

While initial CDCA efforts on issue identification, alternative development, and environmental impact statement design predate the Council on Environmental Quality November 29, 1978 NEPA regulations (43 CFR 1500) and the subsequent Department of the Interior August 7, 1979 Bureau of Land Management planning regulations (43 CFR 1601), the concept of "scoping" prescribed in these regulations has been employed from the beginning.

With the aid of the public involvement processes described in subsequent sections of this document, issues were identified and discussed, preliminary planning alternatives addressing these issues developed, and environmental impact concerns noted for analysis.



MAJOR ISSUES and CONFLICTS

The issues of land use management which the CDCA plan must address arise from the fundamental conflicts which occur as increasing population and expanded technology tax the resources of a finite environment. The increase in the intricacy and sophistication of human activities results not only in increased impacts on familiar resources, but also in the creation of new resources. In the California desert, for example, increased affluence and leisure time combined with the technology of versatile and hardy vehicles created a valuable recreational resource from the desert's remote places, formerly considered by many as wasteland. Similarly, delicate ecosystems have been discovered which are not only aesthetically valuable, but which also yield scientific information with practical applications to improving the quality of life.

The California Desert Plan Alternatives and Environmental Impact Statement Document is able to address those major issues which result from the competition for resources for which law and policy give BLM responsibility and authority. An analysis of these laws and policies, of the nature of uses occurring in the California desert, and of the nature and condition of the CDCA's resources identifies these major issues:

d-1

● MAJOR ISSUES ●

Protection of Archaeological and Historical Artifacts

Protection of Archaeological and Historical Artifacts: A resource of scientific, humanistic, and recreational value, these artifacts and sites require a lack of disturbance to be of value in interpreting the record of how man has lived in the desert. This value must be measured against the uses which impact it.

Native American Values

Native American Values: Native American traditional and religious use of the desert lands is an essential part of an ancient culture which has many adherents today. Many modern uses of the land by the white culture on sensitive Native American sites are perceived as acts of desecration by Native Americans. Understanding the nature of this culture and deciding degrees of control in these areas are significant tasks for planners.

Recreation

Recreation: The increasing numbers of people who are "getting away from it all" in the California desert find that some of it is coming with them. Increasing numbers and types of recreation disturb natural values, and create conflicts among differing types of recreationists competing for the same areas, and also conflicts between recreationists and other users of the desert.

Wilderness Designation

Wilderness Designation: Formerly considered a condition to be subdued, "wilderness" has assumed a high value in the national consciousness. This value confronts an awareness of the need for other limited resources and poses the questions: how much wilderness is enough, and how much can we afford?

Motorized Vehicle Access

Motorized Vehicle Access: The desert's large size, extreme temperatures, and characteristically varied and sparsely vegetated terrain has favored the use of motorized vehicles for access. Roads and ways have proliferated. The issue is how much this traditional freedom of access should be curtailed to protect the fragile desert environment and associated natural and cultural resources.

Energy Production and Plant Siting

Energy Production and Plant Siting: While the desert siting of fossil fuel burning power plants may consume water, space, and air resources in the CDCA, many argue that the desert is the only viable site in southern California for the placement of such facilities. Also, the desert may be a source of alternative power sources such as wind and geothermal energy, the development of which may conflict with natural and cultural resource values.

Utility Corridors

Utility Corridors: A significant portion of the water, electricity, gas, and oil which is used by the southern California metropolitan area crosses the desert. The issue is how to place these corridors so they still effectively serve the city while minimizing impacts to the scenic and natural environment.

Mineral Exploration and Development

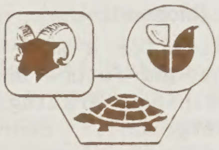
Mineral Exploration and Development: As national inflation and trade deficits increase as a result of foreign import of mineral and energy resources, the need for finding domestic sources of these minerals becomes more important. An economically viable search for these resources requires widespread availability of land. Finding and extracting these hidden, nonrenewable resources can conflict with the protection of the natural environment and other uses of the land.

Domestic Livestock Grazing

Domestic Livestock Grazing: An activity which dates back more than 100 years in the CDCA, grazing supports thousands of cattle and sheep, as well as a traditional desert lifestyle. Competing for forage with native wildlife and wild horses and burros, this use can also conflict with other uses, such as recreation and cultural resource preservation.

Wild Horses and Burros

Wild Horses and Burros: Introduced rather than native species, these large herbivores compete for vegetation with domestic livestock and wildlife and also threaten natural and cultural resources in many areas. The free-roaming nature of these animals is protected by law, but their exploding populations require some degree of control. How much?



Protection of the Natural Environment

Protection of the Natural Environment: Study has revealed that the desert is a rich source of natural features and processes which have scientific, environmental, educational, and recreational value. These desert features and processes are often fragile and very susceptible to the impacts of human activities. Management must continually weigh the need to use and consume these resources with the value of protecting them.

Land Tenure Adjustment

Land Tenure Adjustment: A bewildering pattern of CDCA land ownership and jurisdiction not only hampers the efforts of government to manage the resources of these lands, but also can prevent the owners of private parcels from using these lands in the way they desire.

These various uses of the desert, mentioned briefly in the public values and perception section, will be more thoroughly described in Part II of this document, which presents alternative resolutions of these issues. The remainder of the introduction explains how these alternatives were constructed.

Much of the public input on these issues was of a general nature, particularly that elicited from national, statewide and desertwide polls. This input was valuable in providing, along with the mandate of FLPMA, broad goals for management. These general recommendations did not, however, resolve specific problems of application. The desire for "more protection of wildlife and ecology," for example, does not indicate the type of management appropriate for this goal, where this measure should occur, nor the extent of this protection. How much more? The value of this type of contribution is both supported and rejected by users of the desert who claim their special knowledge of and interest in the CDCA enables them to provide management recommendations with practical application.

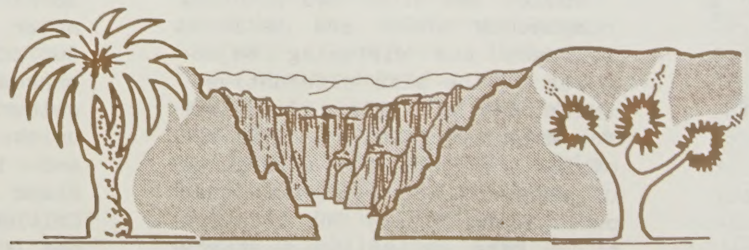
Active in their concern for the uses and resources of the desert, these individuals and groups have presented strongly defined and specific suggestions for resolving the issues central to the planning process.

These individuals represented Federal, State, county, and city governments; desert residents; and organizations sometimes described as "special" publics. To confirm and add to information that these organizations and agencies provided BLM for the desert planning task, BLM contacted a number of these groups for both formal and informal meetings. Among the groups participating were public utility companies; education and research professionals; Native American tribal representatives; motorcycle, four-wheel drive, and dune buggy recreationists; rockhounds; environmental and conservation groups; cultural resource professionals; livestock grazers; and both corporate and noncorporate-affiliated miners.

These individuals were often able to identify specific areas of the desert important to their activity or interest. They were also able to describe the benefits of their activity both to themselves and to the general public. Other activities and types of management which were both compatible and incompatible with their interests were explained by the groups. They also described what they perceived as the negative impacts of their activity or interest on other desert uses or the desert environment.

The groups' interests varied in scope, with some concerned about all desert land issues and others only about a single one. Their proposals indicated three levels at which management of desert uses and resources could be applied: 1) the most valued resources of any broad regional area of the desert should be managed by specifying the types and degree of use which would provide for the most use and enjoyment of those resources; 2) uses which conflict with other uses should be addressed individually, with information and specific management prescriptions for resolving these conflicts where they occur; 3) small, specific areas with special qualities should have management designed specifically for each one.

The planning components which direct land use in the California desert were developed to address these levels of concern. They are described in the next section.



d-2

PLANNING COMPONENTS

The basic design requirements for a comprehensive plan to direct management of the California desert public lands and resources are versatality and flexibility. Three plan components have been devised to frame the total pattern of land use proposed in each of the plan alternatives: (1) Multiple Use Classes and Resource Management Guidelines; (2) Plan Elements consistent with each plan alternative; (3) Areas of Critical Environmental Concern.

1 MULTIPLE USE CLASSES AND RESOURCE MANAGEMENT GUIDELINES

Broad regional concerns will be addressed by a system of multiple use classes. All BLM-managed public lands within the desert are designated within one of four multiple use classes, except those where land ownership patterns require a case-by-case evaluation of their suitability for management by BLM. Each class has a set of resource management guidelines which specify the type and degree of use appropriate to that class. These classes and guidelines will provide a hierarchy of multiple use management, ranging from controlled use to intensive use. In each of these management areas, the class serves to provide for the use or protection of the area's most highly valued resources, as determined by resource inventory and the varying goals and objectives of the plan alternative. The name and purpose of each class:

MULTIPLE USE CLASS C
(Controlled Use)

. To preserve and protect areas having wilderness characteristics described in the Wilderness Act of 1964.

■ To preserve the natural condition and wilderness character of representative desert environments, including examples of Great Basin, Sonoran, and Mojave Deserts in the California desert.

■ To provide opportunities for the use and enjoyment of these areas, while preserving their wilderness characteristics.

MULTIPLE USE CLASS L
(Limited Use)

■ To protect sensitive natural, scenic, ecological, and cultural resources.

■ To provide for generally low-intensity, multiple use of resources where that use can be carefully controlled to insure that natural, scenic, ecological, and cultural values are not diminished.

MULTIPLE USE CLASS M
(Moderate Use)

■ To provide for a wide variety of present and future uses, including mining, grazing, wildlife, watershed, recreation, and utilities.

■ To conserve desert resources and mitigate damage to resources caused by permitted uses.

MULTIPLE USE CLASS I
(Intensive Use)

■ To provide for use of lands and resources to meet human consumptive needs with appropriate mitigation, protection of sensitive natural and cultural values, rehabilitation, and restoration.

2 PLAN ELEMENTS

While the multiple use class designation of an area may allow a number of types and levels of use fully consistent within the guidelines for that class, these uses may be totally incompatible in the same area at the same time. These conflicts, the major issues of the plan, are addressed in nine plan elements. These residual conflicts occur in each multiple use class as they are designed, although they are most limited in Class C, with its dedication to wilderness preservation. The resolution of these conflicts and tradeoffs in use are fundamental to multiple use management. The task of the element is to resolve these conflicts within each class under the broader multiple use class guidelines, or to establish procedures for resolving these conflicts as they are later identified during use of the plan.

The Wildlife, Cultural Resource/Native American and Mineral Exploration and Development Elements primarily provide information about the nature and location of a resource or activity, describing management efforts which would support that resource or activity; in addition, the Wildlife and Cultural Resource/Native American Elements identify subsequent active management plans to follow desert plan adoption. The Livestock Grazing and Wild Horse and Burro, Wilderness, Motorized Vehicle, Recreation, Energy Production and Utility Corridors, and Land Tenure Elements describe decisions about the major tradeoffs in use which the objectives of the various alternatives have dictated.

3 AREAS OF CRITICAL ENVIRONMENTAL CONCERN

The third major planning component allows managers to focus special effort at the site of a distinctly rare or valuable resource. The need for this special consideration arises when the protective measures of the multiple use class and elements are insufficient to prevent harm to the resource, which may be a historic, cultural or scenic value, wildlife resource, or other natural system or process.

Unlike the other two planning components which are tailored to meet the differing objectives of the plan alternatives, the number of ACECs is constant for each alternative. This decision reflects the experience of managers who recognize that publicizing widely the location of a rare or unique resource can lead to degradation or destruction if protective measures are not undertaken soon after its identification. The 50 ACECs in each alternative represent 87 special natural or cultural values, such as the unique geology of Fossil Falls and the riparian habitat of Black Springs. Each Area of Critical Environmental Concern has a special management plan designed to protect its values.

d-3

DEVELOPMENT OF PLAN ALTERNATIVES

As directed by the National Environmental Policy Act for such major actions as the California Desert Plan, the study, description, and development of alternative planning proposals offers an opportunity for two levels of review. First, specialists knowledgeable in socioeconomic and land use factors and resource capabilities can evaluate the consequences of each proposed alternative. The alternatives and this analysis, contained in the Environmental Impact Statement (EIS), are then presented to the public so that it can examine how well its various values and interests are served and contemplate the implications of satisfying its various needs.

Even within the contraints of the planning tools briefly described in the previous section and detailed in Part II, the number of possible alternatives for managing the many uses and resources of the 12.1 million acres of BLM-administered public land in the California desert is virtually limitless.

The challenge implicit in the creation of these alternatives is how to address this diversity of supply and demand while identifying distinct courses of action which can be evaluated within the confines of available time and documentation standards. The four alternatives developed reflect a decision to concentrate on development and analysis of the widest possible range of plan alternatives.

The identification of this range began with the construction of plan concepts which defined its boundaries. As described previously, the values of those groups and individuals with the greatest involvement and familiarity with the California desert were expressed in terms of their positions on the major issues of desert land use. These management recommendations often specified the location of a favored use or activity and the type of management which would best support that activity. Of most application to the planning process were those stances on issues which not only displayed knowledge of desert uses and resources, but also, even though favoring a certain activity or resource, an awareness of competing uses. (For example, a recreationist may define those areas of high recreational potential where he desires the least constraint on his activities, while accepting controls in areas with less potential for these pursuits.) Demands for exclusive use of resources throughout the California desert, such as the complete "lockup" of desert land or the removal of all restraints on development, represented a very small portion of total public input. These were rejected from consideration in defining this range of public values.

For each issue of desert management, those management recommendations for the strongest control of uses and those for intensive use were identified and, if possible, their specific locations were mapped. Using the tool of the four multiple use classes and resource management guidelines, two concepts were developed. One represented the combination of all demands which are oriented to intensive use, consumption, development and production of desert resources. The other emphasized protection and preservation-oriented demands.

The configuration of multiple use classes on these alternatives reflected not only an area-by-area analysis of conflicting needs, but also a consideration of the desertwide pattern of use or protection-oriented management desired. While there was no unanimity even within each group on specific land allocations, these two planning concepts represented brackets which enclose about 95 percent of the options sought by the public.

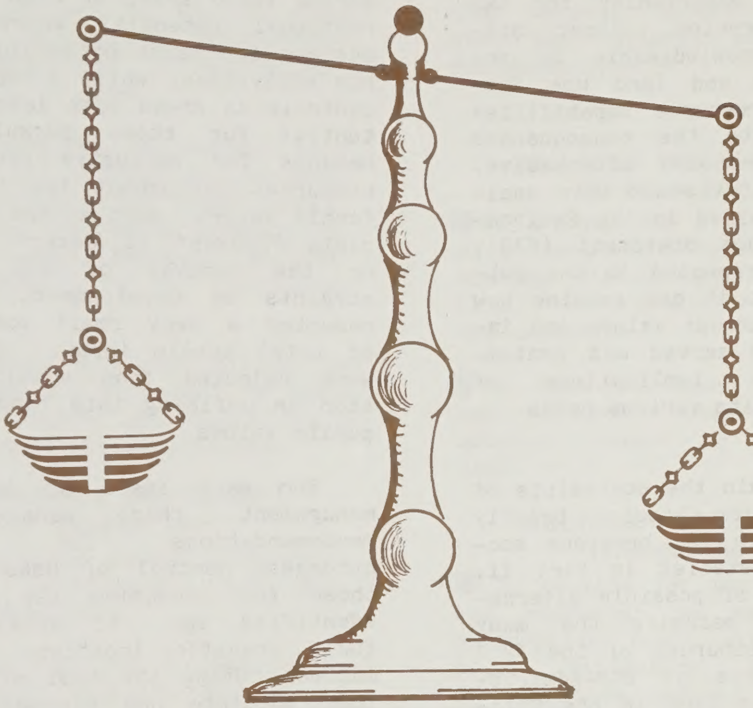
In reviewing these initial concepts, the California Desert Advisory Committee indicated that these concepts were too extreme to be viable and urged that they be drawn in closer to an ideal balanced alternative by applying the constraints of law, BLM policy and basic resource capabilities. The modification of these original concepts and the generation of a Balanced Alternative then proceeded through a rigorous decision process which weighed the allocation of resources and uses by consideration of such factors as:

- ✸ How significant is the current and projected demand or use at local, regional and national levels?
- ✸ Can the demand or use be satisfied by alternative uses or in other locations?
- ✸ What is the historic and current use or status of the area?
- ✸ What is the relative abundance or scarcity of the resource?
- ✸ What is the condition and trend of the resource - stable, improving, or declining?
- ✸ Is the resource rare or unique?
- ✸ What types of impacts can the resource withstand and remain in stable condition?
- ✸ What other resource values are available within the same area?
- ✸ What are the constraints of law and policy that apply to this area and decision?
- ✸ Can the resource or activity be managed effectively? Economically?
- ✸ What are the goals and objectives of Federal, State and local government with jurisdictional interest in the area?

In addition to the three alternatives thus developed, a "No Action" alternative is required under Council on Environmental Quality regulations (43 CFR 1502). While it is not a realistic option for a statutorily mandated plan under FLPMA, it serves as a useful analytical benchmark. Furthermore, parts of this alternative could be adopted into the final plan proposal by translating the "continuation of present management" situation that it represents into final plan decisions. For purposes of comparison, this alternative was translated into the same land use planning format and maps as the other alternatives.

ALTERNATIVES CONSIDERED and REJECTED

The consumption and preservation alternatives originally developed from public input were rejected because they were not fully consistent with law and policy and because of problems with resource capabilities in some areas. Thus, in reworking these outer alternatives, there was a general alleviation of extreme situations. In the Use Alternative, for example, the number of areas for intensive consumptive uses was reduced to fit known resource capabilities. Conversely, several wilderness area proposals in the Protection Alternative were rejected due to such criteria as management feasibility. At the same time these alternatives were also altered as analysis of new data on such features as sensitive wildlife species, mineral deposits, and transmission facility requirements was completed, indicating needs for additional protection or use accommodation.



The need for two or more additional alternatives in the middle range of the use-to-preservation spectrum, offering optimal mixes of multiple use classes with different balances between protection and use, was considered. It was rejected, at least for inclusion in the draft plan EIS. The argument was made by some members of the CDCA Advisory Committee, other members of the public, and also by some BLM staff that the two outer alternatives and the "No Action" Alternative do not constitute viable alternatives that a decision maker could accept as a complete package for implementation. While there is practical merit to this argument, each part of the outer action alternatives is viable; any part can be chosen by the decision maker to replace portions of the Balanced Alternative or to construct a new Balanced Alternative for implementation. For example, a Protection Alternative multiple use class designation could be substituted for the Balanced Alternative multiple use class designation for a particular geographic area if the EIS process and public review indicates the need for such an adjustment. This could take place in a number of areas, with the element portions of the plan alternative similarly adjusted. The capability to adopt different designations from any other alternatives in response to EIS findings and public review could produce a considerably different balanced alternative to adopt as the proposed plan for submission with the final EIS.

In considering the question of two or three additional alternatives, it was decided that the effort necessary to develop and analyze additional balanced multiple use alternatives would add little to the total range of possibilities presented and analyzed. Given constraints of time and space, assessment of additional alternatives would have resulted in a dilution of treatment for each alternative presented, with little or no gain in the range of options analyzed. Such additional alternatives could generate different cumulative impacts, but even these would fall within the range of cumulative impacts analyzed in the four alternatives. As presented, the four alternatives generally provide a multiple use class option in every area of the desert, except those where existing law and resource condition and use preclude offering reasonable options.

part I-e

PUBLIC PARTICIPATION

PUBLIC PARTICIPATION

• workbook •

e-1

PUBLIC PARTICIPATION In developing the Draft Plan Alternatives and E.I.S.:

Public involvement has been an important factor in developing the draft management plan. Focal point for this involvement has been the California Desert Conservation Area Advisory Committee. Beginning in 1977 and extending through 1979, the Committee held a series of 15 meetings which had a total attendance of 2,292. At the forums conducted by the Committee, topics for discussion included recreation, energy, cultural resources, mining, wildlife, wilderness, and other subjects, and dialogue with interested persons was developed.

As a result of the Committee meetings and other contacts, a mailing list of over 8,000 names was compiled.

Radio and television public service spot announcements served to generate further interest and inquiries.

The BLM's Desert Planning Staff contacted various interest groups, requesting position papers to obtain their views. Following study and analysis of these papers and other information, a series of "feedback" meetings with representatives of these groups was held to insure understanding of the input thus obtained. Through this process, initial alternatives reflecting public values were developed as outlined in the preceding section (I-d) on the Planning Process.

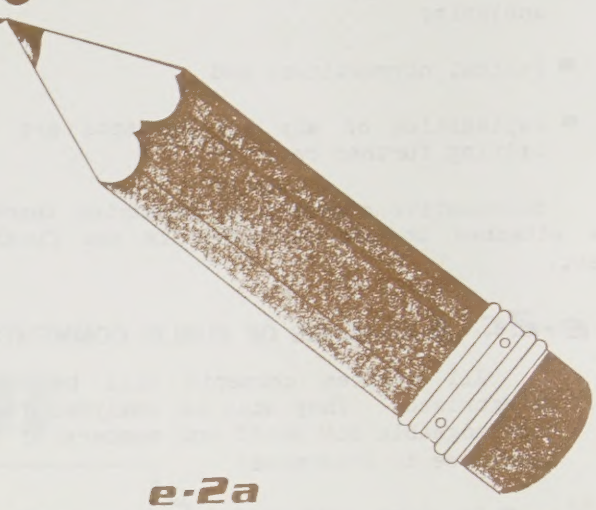
Further public input was obtained by polling citizens at three different levels, nation, State, and desertwide, and from personal interviews with more than 600 desert residents.

Contacts with officials of 23 cities and 8 counties in the CDCA supplemented existing information on local government concerns; key State and Federal agency contacts were also contacted. By this means, initial efforts were made to obtain consistency with local, State, and other Federal agency plans and policies.

e-2

Role in Completion of a Proposed Plan and Final E.I.S.:

Public involvement will continue to play an important role in shaping a final proposed management plan for the CDCA, completing the attendant final EIS, and coming to a final decision on plan implementation. The following steps lie ahead:



e-2a

● CONSISTENCY REVIEW WITH STATE AND LOCAL ● GOVERNMENT AND OTHER FEDERAL AGENCY PLANS AND POLICIES

Following release of the CDCA Draft Plan Alternatives/EIS document, local (county and incorporated city) governments, State government, and other Federal agencies will be asked to evaluate the draft plan alternatives for consistency with their plans and policies. These evaluations will be used in the shaping of the final proposed plan. A more detailed outline of consistency review is provided in Section III on page 172 & 173.

e-2b

● PUBLIC REVIEW AND COMMENT ON ● DRAFT PLAN ALTERNATIVES AND E.I.S.

Public comment will be reviewed and given substantial weight in developing the final plan and EIS. With the release of the draft, there will begin a 90 day public review period scheduled to run from February 15 to May 15, 1980. During this period public responses will be accepted by a number of means. Among these are: use of the work book provided with the document; letters commenting on the plan alternatives or EIS; use of toll-free lines to make inquiries and phone in comments; and twelve public meetings in different locations to hear and record comments.

Comments should be as specific as possible and may address either the merits of the alternatives presented, the adequacy of impact assessment, or both. Whether the work book or a separate letter is used, it will be helpful for review purposes to indicate page numbers or map references where possible. In regard to EIS comments, the focus should be on the accuracy of facts and the validity of the analysis presented. EIS comments will be considered both individually and collectively and responded to in the final statement. Possible responses to comments include:

- Modification of the alternatives and use in developing the proposed plan;
- Development and evaluation of alternatives not previously given serious consideration;
- Supplementing, improvement, or modification of analysis;
- Factual corrections; and
- Explanation of why any comments are not receiving further response.

Substantive comments or summaries thereof will be attached to and published in the final statement.

e-2c ● ANALYSIS OF PUBLIC COMMENTS ●

All written comments will be tabulated and categorized. They will be analyzed for content by knowledgeable BLM staff and members of the Advisory Committee to determine:

- Is there information on the lands or resources of which we are not aware? and;
- What are the wants, needs, and positions of the persons or organizations commenting on the Draft?

e-2d DEVELOPMENT OF PROPOSED PLAN AND FINAL E.I.S.

Information gathered through the analysis of public comments will be considered in the context of needs of the lands and resources and needs and wants of citizens in preparing the proposed plan and the final EIS. It is anticipated that the proposed plan will be developed from within the range of alternatives presented in the draft using the Balanced Alternative as a point of departure. Utilizing comments on the alternatives and the assessment of their environmental impacts, the proposed plan will be built from the parts of each alternative that best can be integrated into a sound, comprehensive, multiple use management plan responsive to public desires, land capability, and resource protection needs.

Prior to publication of the final proposed plan, a workshop will be held with the California Desert Advisory Committee to assess how the proposed plan responds to the comments received.

The final EIS will be strengthened, clarified or corrected as necessary in response to the review comments received. In addition to its coverage of initial alternatives, any new alternatives developed will be assessed, including a full environmental impact assessment of the proposed plan that is developed.

e-2e PUBLICATION OF PROPOSED PLAN AND FINAL E.I.S.

The proposed plan, which will incorporate the Advisory Committee's advice, will be published, with the final EIS, by September 30, 1980, forwarded to the Director of the Bureau of Land Management and the Secretary of the Interior, and distributed publicly to all who have commented on the draft. There will then follow a 30-day period for public comment and an opportunity for the Advisory Committee to offer advice on the final plan. During this period, formal protests may also be filed.

e-2f ● PROTEST PROCESS ●

Anyone who has participated in the planning process and has an interest which is or may be adversely affected by the approval of the plan or any subsequent plan amendment may protest such approval or amendment. A protest may raise only those issues which were submitted for the record to the BLM California State Director during the planning process.

Protests must be filed in writing with the Director, Bureau of Land Management, together with a copy to the California State Director, within 30 days of the Environmetnal Protection Agency published Federal Registry Notice of receipt of the final environmental impact statement on the plan or any susequent amendment. For any amendment not requiring preparation of an environmetal impact statement, the protest must be filed within 30 days of the publication of the notice of its effective date.

The protest must contain:

❶ The name, mailing address, telephone number, and interest of the person filing the request;

❷ A statement of the issue or issues being protested;

❸ A statement of the part or parts of the plan or amendment being protested;

❹ A copy of all documents addressing the issue or issues that were submitted during the planning process by the protesting party or an indication of the date the issue or issues were presented for the hearing record; and

❺ A short, concise statement explaining why the State Director's decision is wrong.

The Director will promptly render a written decision on the protest, setting forth the reasons for the decision. The decision shall be sent to the protesting party by certified mail within 60 days of receipt of the protest.

The decision of the Director shall be the final decision of the Department of the Interior.

e-2g ● FINAL DECISION AND IMPLEMENTATION ●

On completion of the 30 day period following publication of the proposed plan and final EIS; or in the event of protest, following the Director's final decision for the Department of the Interior, a final plan decision wil be made. This decision will be made by the BLM California State Director and upon acceptance by the Director of the Bureau of Land Management and the Secretary of the Interior, the final plan will be implemented by the California State Director. The California Desert Conservation Area Management Plan will then be published and distributed to agencies, organizations, educational institutions, and individuals.

PART II

the plan

CALIFORNIA DESERT CONSERVATION AREA

part II-a

C.D.C.A. DRAFT PLAN

Mono County
BISHOP
NV
CA
Inyo County
San Bernardino County
NEEDLES
Kern County
Los Angeles County
SAN BERNARDINO
LOS ANGELES
ounty
PACIFIC OCEAN
AZ
nperial County
San Diego County
SAN DIEGO
CA
MX

a-1

THE DRAFT PLAN

• multiple-use class guidelines • and conflict resolution criteria

THE DRAFT PLAN

This part of the document begins with presentation of the Multiple Use Class Guidelines which comprise the structural framework for all alternative proposals of the draft California Desert Plan. Following this, summaries are given of the four draft plan alternatives that have been selected, developed, and analyzed. These are discussed in regard to their objectives, their approach to the issues of land use management, and the major actions each would implement if chosen as the final plan. For each alternative, a summary of these major actions is presented in a series of tables capsulizing the actions prescribed in each of the nine plan elements so that the differences and similarities between alternatives can be readily examined. This comparison of major actions is followed by a broad narrative comparison of each of the four alternatives, describing their differences and similarities not only in type and degree of action, but also in their approach to meeting major California desert issues.

After this summary and analysis of the alternatives, the nine elements of the plan are presented in detail. If the multiple use guidelines are the structural framework, or bones, of the plan, the elements are its muscles and sinews. It is in the elements that policies are translated into actions for on-the-ground management. Strengths and weaknesses in capability to implement policy can best be analyzed here.

Finally, following the elements in their four alternative comparison formats, there is a treatment of proposed Areas of Critical Environmental Concern, or ACECs. With the exception of the No Action Alternative, the proposals for number, type, and size of ACECs do not vary by alternative. It is the view of the Desert Plan that critical environmental concerns as specific as these must be met under any action alternative. While last in presentation, ACECs are foremost in importance, as the Congress has clearly stated that public land use planning shall "give priority to the designation and protection of areas of critical environmental concern". (PL 94-579 Section 202).

MULTIPLE USE CLASS GUIDELINES

The California Desert planning task is approached through the means of assigning one of four multiple use class designations to given areas of BLM-administered public lands. These multiple use classes are:

⦿ Class C - Controlled Use. This class is designed to preserve and protect wilderness values in areas that meet the criteria of the Wilderness Act of 1964, where BLM will recommend such areas for formal wilderness designation by Congress. It is the most preservation-oriented and restrictive of the four classes.

⦿ Class L - Limited Use. This class is oriented towards giving priority protection to sensitive natural, scenic, ecological, and cultural resources while placing limitations on other uses that may conflict with or degrade these values. It is the second most restrictive and protection-oriented of the classes.

⦿ Class M - Moderate Use. This class provides for a wide variety of present and future uses under the principles of multiple use and sustained yield of renewable resources. It provides for tradeoffs between uses where conflicts occur and mitigation of damages caused by permitted uses. Management efforts support what can be termed as "resource use according to the principles of conservation."

⦿ Class I - Intensive Use. This class is designed to provide use of lands and resources to meet human needs. It permits intensive land uses with reasonable mitigation and protection of sensitive resource values through rehabilitation when necessary. It is the most consumptive use-oriented class.

These four multiple use classes were assigned to public lands administered by BLM in the CDCA based on the sensitivity of resources present and the current and projected demands for use and development of resources. The distribution of these classes differs widely between plan alternatives, depending on the objective and thrust of the four plan alternatives. The various class distributions of each can be found on maps inserted in the front pocket of this document.

The class designations govern the type and degree of land use actions that are allowed within the areas defined by class boundaries. All land use actions within a multiple use class delineation must meet the guidelines given for that class. These guidelines are presented in the "Multiple Use Class Guidelines" presented on the following pages. Management of each major land use is described for each of the four multiple use classes.

Since it is possible for a number of actions or uses to meet the basic multiple use class guidelines and still be in conflict with each other in a particular area at certain times and degrees of intensity (grazing and mining, for example, are allowed in Class M, but are incompatible on the same site), "Conflict Resolution Criteria and Specific Guidelines" are provided as a second part to the guidelines. This section is designed to provide guidance for resolution of conflicts which may occur within classes (e.g., wildlife protection is given priority over cattle grazing in Class L conflicts, but equal footing in Class M conflicts). Along with the overall guidelines, these criteria aided in building the plan elements, as well as guiding future management decisions.

TABLE A-1

MULTIPLE USE CLASSES AND RESOURCE MANAGEMENT GUIDELINES

	MULTIPLE USE CLASS C Controlled Use	MULTIPLE USE CLASS L Limited Use	MULTIPLE USE CLASS M Moderate Use	MULTIPLE USE CLASS I Intensive Use
PURPOSES	To preserve and protect wilderness values upon designation by Congress as wilderness. These values are defined in the characteristics described by the Wilderness Act of 1964 as areas where the earth and its community of life are untrammeled by man, primeval in character and influence, affected primarily by the forces of nature with man's work substantially unnoticeable, and have outstanding opportunities for solitude for primitive, unconfined recreation while being of sufficient size to make preservation in an unimpaired condition practical. To provide opportunities for the use and enjoyment of these areas while preserving their wilderness characteristics.	To protect sensitive natural, scenic, ecological, and cultural resources. To provide for generally low-intensity, multiple use of resources where that use can be carefully controlled to insure that natural, scenic, ecological, and cultural values are not diminished.	To provide for a wide variety of present and future uses including mining, grazing, wildlife, watershed, recreation, and utilities. To conserve desert resources and mitigate damage to resources caused by permitted uses.	To provide for use of lands and resources to meet human consumptive needs with reasonable mitigation, protection of sensitive natural and cultural values, rehabilitation, and restoration.
INTERIM MANAGEMENT	The Department of the Interior's "Interim Management Policy and Guidelines for Lands Under Wilderness Review," dated December 12, 1979 will govern and regulate activities and uses within wilderness study areas during the interim prior to decision pro or con on wilderness designation by Congress unless stricter guidelines are adopted to meet specific conditions. Areas not designated by Congress as wilderness will be assigned to Class L, M, or I as appropriate following final decision.			
POST DESIGNATION	The following guidelines identify general uses and activities allowed or prohibited in Wilderness Areas upon designation by Congress. However, following adoption of the California Desert Plan, a specific management plan for each Wilderness Area must be prepared which will further define limitations on uses and activities in that area to insure permanent preservation of wilderness qualities.	In areas proposed as Class L but falling within wilderness study areas, Department of the Interior "Interim Management Policy and Guidelines for Lands Under Wilderness Review" December 1979 apply.	In areas proposed as Class M but falling within wilderness study areas, Department of the Interior "Interim Management Policy and Guidelines for Lands Under Wilderness Review" December 1979 apply.	In areas proposed as Class I but falling within wilderness study areas, Department of the Interior "Interim Management Policy and Guidelines for Lands Under Wilderness Review" December 1979 apply.
RECREATION	This class is suitable for non-mechanized types of recreational experiences which generally involve low to very low user densities. Recreation opportunities provided include, but are not limited to the following characteristic activities:	This class is suitable for recreation which generally involves low to moderate user densities. Recreation opportunities may include:	This class is suitable for a wide range of recreation activities which generally involve moderate and high user densities. Most recreational opportunities will be provided, except for vehicle play and competitive events off approved routes. Point-to-point competitive events will be allowed on designated routes.	This class is suitable for recreation activities which generally involve high user densities. A wide array of recreational opportunities will be found in this class. Off-road vehicle free play and competitive events will be allowed where designated.

TABLE a-1 (cont.)

MULTIPLE USE CLASSES AND RESOURCE MANAGEMENT GUIDELINES

	MULTIPLE USE CLASS C Controlled Use	MULTIPLE USE CLASS L Limited Use	MULTIPLE USE CLASS M Moderate Use	MULTIPLE USE CLASS I Intensive Use
Recreation (cont.)	Backpacking Primitive, unimproved site camping Cultural resource observation Hiking Horseback riding Nature study/observation Photography/Painting Rockclimbing Spelunking Rockhounding Hunting	Backpacking Primitive, unimproved site camping Cultural resource observation Collecting non-protected materials Hiking Horseback riding Nature study/observation Photography/Painting Rockclimbing Sand sailing on dry lakes Spelunking Rockhounding Hunting Non-competitive vehicle touring on designated roads, trails, and ways.	Same as in Class L; in addition, organized motorized vehicle events on existing roads and ways.	Same as in Class M; in addition, organized motorized vehicle events in areas designated open on motorized vehicle plan.
	Temporary Sanitation facilities for the above activities may be allowed at the discretion of the authorized officer.	Temporary sanitation facilities for the above activities may be allowed at the discretion of the authorized officer. Developed camping areas, access roads, and trails will be limited, to avoid degradation of sensitive resource values. In particularly sensitive areas, camping may not be allowed.	Recreation facilities (restrooms, water, cooking grills) may be provided to accommodate moderate numbers of campers. Way stations, interpretive facilities, and field contact stations will be allowed.	Recreation facilities may be provided to accommodate large numbers of people.
MOTORIZED VEHICLES	Motorized vehicle use is not allowed except as provided for in the Wilderness Act and specified through individual wilderness management plans and as necessary to serve valid and existing rights (e.g., emergency use for public safety).	Motorized vehicle use will be allowed on designated roads and ways. Periodic or seasonal closure of designated roads may be required because of fire hazards, wildlife breeding, etc.	Motorized vehicle use will be allowed only on existing roads and ways or designated routes. BLM will delineate such roads and ways or designated routes on suitable maps for dissemination to the public when necessary for management purposes to clarify existing road, way or designated route status.	Motorized vehicle use will be allowed on existing roads and ways or designated routes. Motorized vehicle off-road free play will be allowed only in designated "open" areas.
ACCESS / TRANSPORTATION	Vehicular access will be allowed only to serve valid existing rights. The use of existing roads and ways or construction of new roads will be controlled by terms of right-of-way grants. Maintenance of these roads and ways shall be consistent with wilderness objectives. New vehicular roads and ways to serve the public are not allowed. Existing vehicular public access routes not required for public safety or fire protection shall be closed to vehicular use in cooperation with State and county authorities where involved.	Designated roads and ways will be open to use. New roads may be developed under right-of-way grants upon approval by the authorized officer.	Existing roads and ways will be open to use unless designated closed by the authorized officer. New roads may be developed under right-of-way grants upon approval of the authorized officer.	Same as in Class M.
		Permanent equipment storage and maintenance areas are not allowed.	Permanent equipment storage and maintenance areas may be allowed.	Same as in Class M.
	Existing hiking and equestrian trails are open to use and new hiking and equestrian trails may be allowed.	Same as in Class C.	Same as in Class C.	Same as in Class C.
	Railroads and trams are not allowed except for operations on existing rights-of-way for this purpose.	Railroads and trams will be allowed if no other viable alternative is possible.	Railroads and trams will be allowed to serve authorized uses.	Railroads and trams will be allowed in this class.
	Aircraft facilities are not allowed.	Emergency landing strips will be allowed by permit subject to conformance with county or regional airport plans and FAA and DOD approval.	Airports and landing strips will be allowed by permit subject to conformance with county or regional airport plans and FAA and DOD approval.	Same as in Class M.
UTILITIES Transmission	New transmission facilities for electricity, gas, water, and telecommunications are not allowed. New licenses or rights-of-way for these purposes will not be granted. Existing facilities may be maintained but not expanded. Improvements may be allowed if they do not degrade wilderness values. Existing facilities shall be removed and premises restored upon abandonment or expiration of useful life.	New gas, electric transmission, water, and trans-desert telecommunications facilities will be allowed only within designated corridors. Proposals for such facilities outside of the adopted utility corridors are generally considered incompatible with the purposes of this class.	Same as in Class L.	Same as in Class L.

TABLE A-1 (cont.)

MULTIPLE USE CLASSES AND RESOURCE MANAGEMENT GUIDELINES

	MULTIPLE USE CLASS C Controlled Use	MULTIPLE USE CLASS L Limited Use	MULTIPLE USE CLASS M Moderate Use	MULTIPLE USE CLASS I Intensive Use
Utilities (cont.)		The BLM will consider such proposals only if they are submitted as requests for plan amendment (see below). Approval of a plan amendment for additional utility corridors is discretionary and in this class is considered a significant Federal action requiring an EIS.		
Distribution	New licenses or rights-of-way for distribution facilities to serve private properties will not be granted. Existing facilities may be maintained or improved but not expanded. Existing facilities shall be removed and premises restored where feasible upon abandonment or expiration of the useful life of the facilities. New communication sites are not allowed. Existing sites and facilities may be maintained in accordance with right-of-way grants and applicable regulations.	Existing facilities may be maintained and upgraded or improved in accordance with special temporary use permits or amendments to rights-of-way. Such facilities shall be removed and the premises restored where feasible upon abandonment or expiration of the useful life of the facilities.	Same as in Class L.	Same as in Class L.
		New distribution systems are allowed and will be placed underground where feasible, except where this would have a more detrimental effect on the environment than surface alignment. In addition, new distribution facilities will be placed within existing right-of-way corridors where they are reasonably available.	New distribution facilities are allowed and will be placed within existing right-of-way corridors where they are reasonably available.	Same as in Class M.
		Existing facilities may be maintained and upgraded or improved in accordance with temporary use permits or amendments to rights-of-way. Such facilities shall be removed and the premises restored where feasible upon abandonment or expiration of the useful life of the facilities.	Same as in Class L.	Same as in Class L.
Communication Sites	Communication sites are not allowed.	Communication facilities will be allowed on designated sites.	Same as in Class L.	Same as in Class L.
		Existing facilities may be maintained in accordance with right-of-way grants and applicable regulations.	Same as in Class L.	Same as in Class L.
ENERGY / UTILITIES	Electric generation plants are not allowed.	Same as in Class C.	All types of electric generation plants will be allowed in accordance with State, Federal, and local law. An EIS will be prepared on specific proposals.	Same as in Class M.
MINERAL EXPLORATION AND DEVELOPMENT	Mineral permits, leases and material sales contracts will not be issued. Existing mineral leases and material sale contracts may continue as authorized by law pursuant to operational plans to prevent degradation of the lands and wilderness values. Mining claim locations for locatable minerals are also prohibited except for valid existing rights which may continue as authorized by law and pursuant to operational plans that will not unnecessarily degrade wilderness characteristics. Plans for any surface disturbing exploration mineral resources must be approved by the authorized officer. An environmental impact statement will be required prior to a decision on the proposed exploration activity.	Mineral exploration and development will be carefully analyzed on a case-by-case basis. Intensive mitigation will be required to protect sensitive scenic, ecological, wildlife, vegetative, and cultural values. Locatable mineral operations are non-discretionary. However, prior to any surface disturbing prospecting, exploration, or development, a plan of proposed operations and reclamation will be reviewed by BLM for potential residual impacts on sensitive resources. If such impacts are anticipated, the proposal will be considered a significant Federal action in this class, requiring filing of an environmental impact statement prior to any decision on the proposal.	Mineral exploration and development activities are generally compatible with other actions allowed in this class, subject to adequate mitigation of impacts on critical or sensitive resources or values. Undue environmental disturbance will not be allowed. Prior to any surface-disturbing prospecting or exploratory activity for mineral resources, the prospective user will submit to the BLM authorized officer managing the area or to the U.S. Geologic Survey, as appropriate, a plan of the proposed operations and reclamation. The plan will be evaluated for its conformity with existing regulations. Environmental assessment of impacts of the proposed plan will be required as the basis for approval, changes, or disapproval.	Exploration and development are allowed subject to all applicable laws and regulations.

TABLE A-1 (cont.)

MULTIPLE USE CLASSES AND RESOURCE MANAGEMENT GUIDELINES

	MULTIPLE USE CLASS C Controlled Use	MULTIPLE USE CLASS L Limited Use	MULTIPLE USE CLASS M Moderate Use	MULTIPLE USE CLASS I Intensive Use
Mineral Exploration and Development	Plans for development must be submitted for BLM or USGS approval as appropriate. An EIS will be required prior to a decision on the proposal.	The BLM will adopt uniform procedures and standards, prescribing the kind and nature of the mining operation plans to be filed for review, and the procedures and time limits for review and action on such proposals. Development of locatable minerals will be limited to activities necessary to achieve extraction with minimum environmental impact, using best available mitigation technology and most effective feasible reclamation practices. Mineral sales and leases are discretionary and, if allowed in this class, will be considered a major Federal action with potentially significant impacts based on this plan and its EIS findings. Therefore, prior to any leasing or sale decision an EIS must be prepared.	Development and reclamation plans must be filed with BLM or USGS, as appropriate, prior to undertaking development. Such plans will include as a minimum: location of the area, equipment to be used, method of development, route and means of access, location and quantities of material to be removed or displaced, and methods of reclamation. An environmental assessment record will be prepared on all plans of operations for locatable, leasable, and saleable minerals. Development and reclamation must be approved before operations are begun. All activities must comply with applicable laws and regulations. Access routes and utility service routes will be considered under applicable rights-of-way regulations.	
WILDLIFE				
Predator and Pest Control	Predator and pest control will not be allowed except to alleviate public health hazards.	Control of depredating wildlife and pests will be allowed in accordance with existing State and Federal laws, subject to guidelines prescribed in the Wildlife Element.	Predator and pest control will be allowed in accordance with existing State and Federal law.	Same as in Class M.
Habitat Manipulation	Projects to improve wildlife habitat, particularly water developments, will be allowed subject to environmental assessment.	Projects to improve wildlife habitat will be allowed subject to environmental assessment.	Same as in Class L.	Same as in Class L.
Reintroduction or introduction of Natives or Established Exotics	Reintroduction of natives allowed.	Reintroduction or introduction of natives or established exotics allowed.	Same as in Class L.	Same as in Class L.
LIVESTOCK GRAZING / WILD HORSES AND BURROS				
Livestock Grazing	Grazing will be allowed subject to limitations to preserve wilderness characteristics. Support facilities, such as permanent corrals, loading chutes, and water troughs, will not be allowed except for existing grazing uses pursuant to valid existing leases, licenses, and permits. Maintenance of such facilities will be controlled to prevent unnecessary or undue degradation of wilderness values. Manipulation of vegetation by chemical or mechanical means will not be allowed.	Grazing will be allowed subject to the protection of cultural, scenic, wildlife, and other sensitive resources. Support facilities such as corrals, loading chutes, water developments, and other facilities, permanent or temporary, will be allowed consistent with protection of sensitive resources. Manipulation of vegetation by chemical or mechanical means will not be allowed.	Grazing will be allowed subject to consistency with other multiple uses. Support facilities such as corrals, loading chutes, water developments, and other facilities, permanent or temporary, will be allowed. Vegetation manipulations will be allowed and may be designed, developed, and managed for intensive livestock use.	Grazing will be allowed. In areas being managed for intensive livestock use, support facilities will be allowed and may be encouraged. They may be designed and located for maximum efficiency of the livestock operation. Vegetative manipulation will be allowed and may be designed, developed, and managed consistent with intensive livestock use. In areas being managed more intensively for other uses with which support facilities might interfere (e.g., industrial, ORV play areas), structures and facilities must be designed and placed to avoid interference with these uses. Vegetative manipulation will be allowed to the extent that it is technically and economically feasible, considering site conditions and impacts on other allowed uses, except that such other uses must be compatible with existing authorized grazing use.

TABLE A-1 (cont.)

MULTIPLE USE CLASSES AND RESOURCE MANAGEMENT GUIDELINES

	MULTIPLE USE CLASS C Controlled Use	MULTIPLE USE CLASS L Limited Use	MULTIPLE USE CLASS M Moderate Use	MULTIPLE USE CLASS I Intensive Use
Wild Horses and Burros	Wild and free-roaming horses and feral burros will be subject to removal or other controls where necessary to protect wilderness values.	Populations of wild and free-roaming horses and feral burros will be subject to removal or other controls to protect cultural, scenic, wildlife, and other sensitive resources.	Numbers and locations of wild and free-roaming horses and feral burros will be managed in consistency with provisions established in the livestock grazing element for the allocation of forage resources and consideration of other resource values.	Same as in Class M.
MISCELLANEOUS				
Waste Disposal	Waste disposal sites will not be allowed in this class.	Hazardous waste disposal will not be allowed. Non-hazardous waste disposal will not be allowed. Existing waste disposal sites will be phased out.	Public lands managed by BLM may not be used for hazardous waste disposal. Where locations suitable for such disposal are found on BLM-managed lands, consideration will be given to transfer of such sites to other ownership for this use. Non-hazardous waste disposal sites may be allowed.	Same as in Class M.
Residential, Commercial, and Industrial Land Uses	Commercial structures and residential or industrial land uses will not be allowed unless directly associated with valid existing rights.	Same as in Class C.	Commercial structures and industrial and temporary residential occupancy may be allowed subject to compliance with city and county general plans and regulations.	Same as in Class M.
Research	Individuals, groups, and institutions must file an activity plan with BLM and apply for a permit.	Same as in Class C.	Same as in Class C.	Same as in Class C.
Education	Classroom education will be encouraged in this class. However, removal of material will be discouraged.	Classroom education is encouraged in this class.	Classroom education is appropriate in this class.	Same as in Class M.
Agriculture	Agriculture, other than livestock grazing, will not be allowed.	Same as in Class C.	Agricultural uses will be allowed on suitable land.	Same as in Class M.
Harvesting (Plants, Fruits, Nuts, Blossoms)	Non-commercial harvest of plant parts, fruits, nuts, blossoms, or other plant products will be allowed if such harvesting will not impair wilderness values. Commercial harvesting will not be allowed.	Non-commercial and commercial harvesting of fruits, nuts, and blossoms will be allowed. Permits with special stipulations will be required for commercial harvesting and for collection of plants or plant parts.	Non-commercial harvesting of nuts, fruits, and blossoms will be allowed. Permits with special stipulations will be required for commercial operations and for collection of plants.	Non-commercial harvest of fruits, nuts, and blossoms will be allowed. Permits with special stipulations will be required for commercial operations and for collection of plants, including salvaging of plant materials.
Fire Management	Naturally occurring fires and modified suppression action will be considered and evaluated. No motorized vehicle use or mechanized fire line construction will be allowed without the BLM State Director's approval. Helispots will be permitted only when they are deemed administratively necessary and only where minimal helispot construction is necessary. Fire retardant drops (water or "dissipating dye" retardant) will be considered on an individual basis, taking into consideration management objectives of water quality, wildlife, and vegetation.	Modified suppression techniques and actions will be employed taking human and natural resources into consideration. Should a potential threat exist to human and natural resources, consideration will be given to use of motorized equipment for fireline construction. Use of retardant drops will be important and their use will be considered where there is a threat to human or natural resources. Prescribed burning will be evaluated as a tool for vegetation management and fuel reduction.	All wildfires will be suppressed. Prescribed burning will be considered as a tool for fuel reduction to minimize the threat to human life and property and to meet other management objectives.	Same as in Class M. Same as in Class M.
Air Quality	These areas will be managed to protect their air quality and visibility in accordance with Class I objectives of Part C of the Clean Air Act Amendment unless otherwise redesignated as Class II by the California Air Resources Board. Adjacent areas will also be managed to protect Class C air quality and visibility values.	Class L areas, most of which have air quality currently better than the national standards, will be managed to avoid significant deterioration of air quality, in accordance with Class II, Part C, of the Clean Air Act Amendments.	These areas will be managed to avoid significant deterioration of the current air quality. Development will be allowed up to fulfillment of the Class II increment, in accordance with Part C of the Clean Air Act Amendments.	These areas will be managed to avoid significant deterioration of current air quality. Currently these areas are classified Class II. Under Part C of the Clean Air Act Amendments, development will be allowed up to fulfillment of the Class II increment, unless the California Air Resources Board reclassifies them to Class III. At that time, development would be allowed up to the Class III increment.

TABLE A-1 (cont.)

MULTIPLE USE CLASSES AND RESOURCE MANAGEMENT GUIDELINES

	MULTIPLE USE CLASS C Controlled Use	MULTIPLE USE CLASS L Limited Use	MULTIPLE USE CLASS M Moderate Use	MULTIPLE USE CLASS I Intensive Use
Water Quality	These areas will be managed to avoid degradation of both surface and ground water resources.	Areas designated in this class will be managed to minimize degradation of the water resources. Best management practices, developed by the Bureau during the planning process outlined in the Clean Water Act, Section 208, and subsequently, will be used to avoid degradation and comply with Executive Order 12088.	Same as in Class L.	These areas will be managed to minimize degradation of water resources. Best management practices, developed by the Bureau during the planning process outlined in the Clean Water Act, Section 208, and subsequently, will be used to keep impacts on water quality minimal and comply with Executive Order 12088.
Land Tenure Adjustment	Land will be acquired as necessary to assure protection of wilderness values and maintain wilderness experience values.	Valuable public resources will be disposed of and, in return, private/state land will be acquired, resulting in a net gain in public resource values to meet CDCA multi-resource goals. Case by case management analysis of acquisition/disposal actions proposed with public involvement.	Same as in Class L.	Same as in Class L.

CONFLICT RESOLUTION CRITERIA AND SPECIFIC GUIDELINES

	MULTIPLE USE CLASS C Controlled Use Recommended Wilderness Area	MULTIPLE USE CLASS L Limited Use	MULTIPLE USE CLASS M Moderate Use	MULTIPLE USE CLASS I Intensive Use
GENERAL	Conflicts will be resolved toward retention and protection of wilderness characteristics as established in the components of a wilderness management plan accepted by Congressional action.	Conflicts will be resolved toward retention and enhancement of scenic, ecological, and cultural resources.	Conflicts will be resolved through a consideration of the economic, social, ecological, scenic, geologic, and cultural values present. Multiple use resource tradeoffs will be most apparent within this class.	Conflicts will be resolved toward the more intensive management uses, with consideration for such values as scenic, geologic, ecological, and cultural resources. Protection of these resource values will be provided where appropriate through reasonable management prescriptions and stipulations. Conflicts between intensive management uses will consider relative economic and social values and potential to meet use demands in alternative Class I areas.
CULTURAL RESOURCES / NATIVE AMERICAN VALUES	Archaeological and Native American values will be preserved and protected. Procedures described in 36 CFR 800 will be observed where applicable and the relevant Native American Group(s) will be consulted.	Archaeological and Native American values will be preserved, protected, or mitigated following 36 CFR 800 procedures and in consultation with the relevant Native American Group(s).	Where avoidance of impacts on archaeological - historical and Native American resources of values cannot be assured in land use decisions, fullest possible mitigation will be undertaken following 36 CFR 800 procedures. In the case of Native American values, consultation with concerned Native American traditionalists, religious leaders, elders and organizations will be first undertaken.	Same as in Class M.
RECREATION	Types and levels of activity will be restricted so as not to detract from wilderness values or experience. Setting and density of use will be characterized by a large, essentially unmodified natural environment, free from evidence of man-induced restrictions and controls. Concentration of users is very low.	Types and levels of activity will be permitted to the extent sensitive or fragile natural or cultural resources are not impaired or destroyed. After meeting this criterion, the sustained yield, multiple use concept of making tradeoffs between competing uses while keeping all uses within the capacity of the land and its resources will be applied. Setting and density of use will be characterized by predominantly unmodified natural environment of moderate-to-large size. Often evidence of other users exists. Minimal on-site controls. Restrictions, but are subtle. Concentration of users is low.	Types and levels of activity will be based on a recognition that recreation is one of the multiple uses permitted in balance with other uses on a sustained yield basis. This principle dictates that an increase in one use may require reductions in other uses to keep all uses within the capacities of the land and its resources. Setting and density of use will be characterized by predominantly natural environment with moderate evidences of sights and sounds of man that usually harmonize with the natural environment. Evidence of other users prevalent. Controls and regulations offer a sense of security. Concentration of users is low to moderate.	Types and levels of activity will be permitted with mitigation of damages for wildlife and plant species and cultural resources on a case by case basis. Setting and density of use will be characterized by substantially modified natural environment. Sights and sounds of man readily evident. Concentration of visitors is moderate to high.

TABLE A-1 (cont.)

CONFLICT RESOLUTION CRITERIA AND SPECIFIC GUIDELINES

	MULTIPLE USE CLASS C Controlled Use Recommended Wilderness Area	MULTIPLE USE CLASS L Limited Use	MULTIPLE USE CLASS M Moderate Use	MULTIPLE USE CLASS I Intensive Use
Recreation (cont.)	Only essential facilities for resource protection will be provided. No facilities will be constructed for visitor comfort or convenience, with exception of temporary sanitary facilities at the discretion of authorized officer.	Limited developed camping areas, access roads and trails will be provided with consideration for protection of resource values and safety of users.	Facilities will be provided for convenience of users as well as for safety and resource protection.	Facilities will be designed for use by large numbers of people and often provided for special activities.
	The recreational experience opportunity provided will be one of considerable isolation, independence, closeness to nature, tranquility, and self-reliance.	The recreation experience opportunity provided will be one of moderate to high isolation, independence, closeness to nature, tranquility, and self-reliance.	The recreational experience provided will be one of equal opportunity for contact with other groups and for isolation. Opportunity for high degree of interaction with natural environment exists.	The recreational experience provided will be one of opportunity to experience affiliation with individuals and groups. Convenience of site and opportunities are prevalent. Opportunity for competitive and spectator sports and for passive uses of highly man-influenced recreation areas and open spaces are common.
	Spacing of groups will be informal and dispersed, minimized contacts with other groups and individuals.	Group spacing may be formalized to dispersed use. Low to moderate contacts with other groups or individuals.	Spacing maintained will be low to moderate with facilities sometimes provided for groups.	Moderate to high densities of groups and individuals provided for in developed areas: moderate densities may exist away from developed sites.
	No permanent on-site facilities (signs, kiosks, etc.) or mobile units are allowed.	Facilities, including mobile units, will be provided as needed consistent with class guidelines. Designs made for handicapped, as appropriate.	Same as in Class L.	Same as in Class L.
	Size of user groups will be kept small.	Size of user groups moderate.	User group size generally unlimited.	Same as in Class M.
	Field contacts are limited to wilderness patrol.	Regular contact may occur with visitors by rangers and interpretative specialists.	Same as in Class L.	Same as in Class L.
VISUAL RESOURCES	Basically only natural ecological changes will be permitted in visual resources. Management activities will not attract attention.	Modification of visual resources may occur but will be kept inconspicuous to the casual observer.	Modifications of visual resources may occur but should not become dominant landscape features.	Modifications of visual resources that are dominant landscape elements are acceptable, but designs should borrow from surrounding landscape features.
SCIENTIFIC RESEARCH	Encouraged, with limits on specimen gathering; must be consistent with class guidelines and regulations. Emphasis on basic research.	Encouraged, must be consistent with class guidelines and other appropriate regulations. Both applied and basic research are appropriate.	Same as Class L.	Same as Class L.
WILDERNESS	Criteria are fully covered in Multiple Use Guidelines.	Not applicable.	Not applicable.	Not applicable.
MOTORIZED VEHICLES	Generally not allowed except for emergency and valid and existing rights noted in multiple use class guidelines.	Access to critical or sensitive areas and some ACECs will be limited to designated roads. Temporary, seasonal, or permanent closures of some roads may be used to provide protection for resources highly sensitive to impact from vehicle use and human access. No competitive events allowed. Access will be provided for valid, existing rights.	Organized events (competitive and non-competitive) will be limited to roads and ways designated specifically for such use, designated point to point routes, and open (Class I) areas designated to use as start, finish, and pit areas. The number and type of events will be limited and closely monitored to protect all resource values to the point that the land's sustained yield multiple use capacity is not seriously impaired.	Organized events (competitive and non-competitive) will be limited to "open areas" and roads and ways designated specifically for such use. Areas will be designated to serve as start, finish, and pit areas. The number and type of events will be limited and closely monitored to protect the land and the associated public resource values.
ENERGY PRODUCTION AND UTILITY CORRIDORS	Not allowed.	Power plant siting not allowed. Utility corridor establishment criteria same as in Class M.	Energy production siting and/or utility corridor establishment only when considerations for environmental quality (biological, scenic, air, and water), degree of joint use, State and local land use policies, economic and technological feasibility, national security and safety of human life and property are met.	Same as in Class M.

TABLE A-1 (cont.)

CONFLICT RESOLUTION CRITERIA AND SPECIFIC GUIDELINES

	MULTIPLE USE CLASS C Controlled Use Recommended Wilderness Area	MULTIPLE USE CLASS L Limited Use	MULTIPLE USE CLASS M Moderate Use	MULTIPLE USE CLASS I Intensive Use
MINERAL EXPLORATION AND DEVELOPMENT	Only where valid rights exist: subject to reasonable restrictions to protect wilderness values and experience.	Will include mitigation measures to protect natural and cultural resources. Plans for proposed prospecting, exploration, or development will be submitted to the BLM or USGS as appropriate for review and approval prior to initiation of any proposed activity.	Compatible with appropriate mitigation for natural and cultural resources subject to applicable laws.	Same as in Class M.
	Operations will conform to all applicable regulations including CFR 3809 regulations as proposed and the California Surface Mining and Reclamation Act (SMARA).	Same as in Class C.	Same as in Class C.	Same as in Class C.
WILDLIFE	Habitats will be maintained or improved so as not to detract from wilderness values or experience.	Important wildlife resources will be protected and enhanced through management designed to promote "good to excellent" populations and habitats. Adverse activities toward wildlife will be extremely limited through management prescriptions and stipulations.	Important wildlife resources will be considered equally on a multiple use and sustained yield basis.	Management will be directed toward providing safeguards through mitigation and stipulations and toward stabilization, and restoration of habitats degraded or lost.
a) Rare, threatened, and endangered Species (Both State and Federal)	All state and federally listed species and their critical habitat will be fully protected. Actions which may affect or jeopardize federally listed species continued existence will require consultation with the U.S. Fish and Wildlife Service.	Same as described under Class C.	Same as in Class C.	Same as described under Class C.
b) Sensitive Species	Identified species will be given priority consistent with protection of wilderness values.	Identified species will be given priority in management decisions.	Identified species crucial habitats and populations will be given equal consideration in conflict resolution along with other resource uses. Protection will be provided through mitigation and stipulations or selection of an alternative which does not cause the species to become threatened or endangered.	Identified species will be given consideration in management prescriptions and mitigation. Rehabilitation of species and species habitats will be included in adverse actions affecting sensitive species. Where mitigation can protect the species it will be used.
c) Other Wildlife Species	Species and habitats will be given equal consideration with all other resource needs consistent with protection of wilderness values and experience. Crucial habitats will be protected.	Species and habitats will be given equal consideration on a multiple use and sustained yield basis. Crucial habitats will be protected.	Same as Class L.	Species and habitats will be considered and protected where possible thorugh management prescriptions and mitigation. Rehabilitation of species and habitats will be included in adverse actions affecting the species or their habitats.
d) Predator Pest Control	Not allowed except during a major disease epidemic and then only consistent with protection of wilderness values and experience.	Allowed only to the extent necessary to accomplish stated objectives for all resource uses and for the protection of public health.	Same as described under Class L.	Same as described under Class L.
e) Habitat Manipulation	All projects must be consistent with the protection of wilderness values and experience and in conjunction with other allowed resource uses.	Active habitat management programs will be carried out, but must be consistent with protection of and enhancement of natural and cultural resources.	Active habitat management programs will be carried out, but must be considered on an equal basis with other resource uses and in compliance with multiple use and sustained yield principals.	Same as described in Class M.
f) Reintroduction or introduction of natives or established exotics	Will be extremely limited and must be consistent with protection of wilderness values and experience.	Must be consistent with prior resource capability analysis and will not replace existing species.	Must be consistent with prior resource capability analysis and will not replace existing species. Must consider other uses.	When not in conflict with other uses.
LIVESTOCK GRAZING	Management prescriptions and facilities will be consistent with the protection of the wilderness values and experience. Fencing, water developments and grazing use will be limited to specific levels and applications established in an individual wilderness management plan approved through congressional action.	Allowed at a level which will provide for full protection of sensitive natural and cultural resources.	Allowed at a level consistent with multiple use and sustained yield for all resources. Intensive management prescriptions required.	Full allocation for use and enhancement of livestock production within the allocated carrying capacity subject to tradeoffs with other intensive uses on social and economic criteria. Intensive management prescriptions required.

TABLE A - 1 (cont.)

CONFLICT RESOLUTION CRITERIA AND SPECIFIC GUIDELINES

	MULTIPLE USE CLASS C Controlled Use Recommended Wilderness Area	MULTIPLE USE CLASS L Limited Use	MULTIPLE USE CLASS M Moderate Use	MULTIPLE USE CLASS I Intensive Use
WILD HORSES AND BURROS	Allocations of forage to meet wildlife, watershed, and multiple use class objectives will be taken from the total carrying capacity of the area, prior to making forage allocations for wild horses and burros within any livestock grazing allotment.	Same as in Class C.	Same as in Class C.	Same as in Class C.
	Outside of established or proposed livestock grazing allotments, 100% of the available carrying capacity will be allocated to wild horses and burros after first making allocations for wildlife watershed and multiple use class objectives.	Same as in Class C.	Same as in Class C.	Same as in Class C.
	Within grazing allotments at or below present carrying capacity, wild horse and burro populations will be reduced to 75% of their 1979 population levels.	Within grazing allotments at or below present carrying capacity, wild horse and burro populations will be reduced to 50% of their 1979 population levels.	Within grazing allotments at or below present carrying capacity, wild horse and burro populations will be reduced to 25% of their 1979 population levels.	Within grazing allotments at or below present carrying capacity, wild horse and burro populations will be reduced to 10% of their 1979 population levels.
	Within grazing allotments which exceed the present carrying capacity, allocations for wild horse and burro populations will be reduced to 75% of the available carrying capacity, following appropriate allocations to meet wildlife watershed and other multiple use class objectives.	Within grazing allotments which exceed the present carrying capacity, allocations for wild horse and burro populations will be reduced to 50% of the available carrying capacity, following appropriate allocations to meet wildlife watershed and other multiple use class objectives.	Within grazing allotments which exceed the present carrying capacity, allocations for wild horse and burro populations will be reduced to 25% of the available carrying capacity, following appropriate allocations to meet wildlife watershed and other multiple use class objectives.	Within grazing allotments which exceed the present carrying capacity, allocations for wild horse and burro populations will be reduced to 10% of the carrying capacity, following appropriate allocations to meet wildlife, watershed and other multiple use class objectives.
	In the event that the above adjustments, supplemented by feasible mitigation measures, are inadequate to meet wilderness and sensitive resource objectives, further wild horse and burro reductions may be made on a case-by-case basis.	In the event that the above adjustments, supplemented by feasible mitigation measures, are inadequate to meet sensitive resource protection objectives, further wild horse and burro reductions may be made on a case-by-case basis.	Same as in Class L.	Same as in Class L.

part II-b

Plan Alternatives

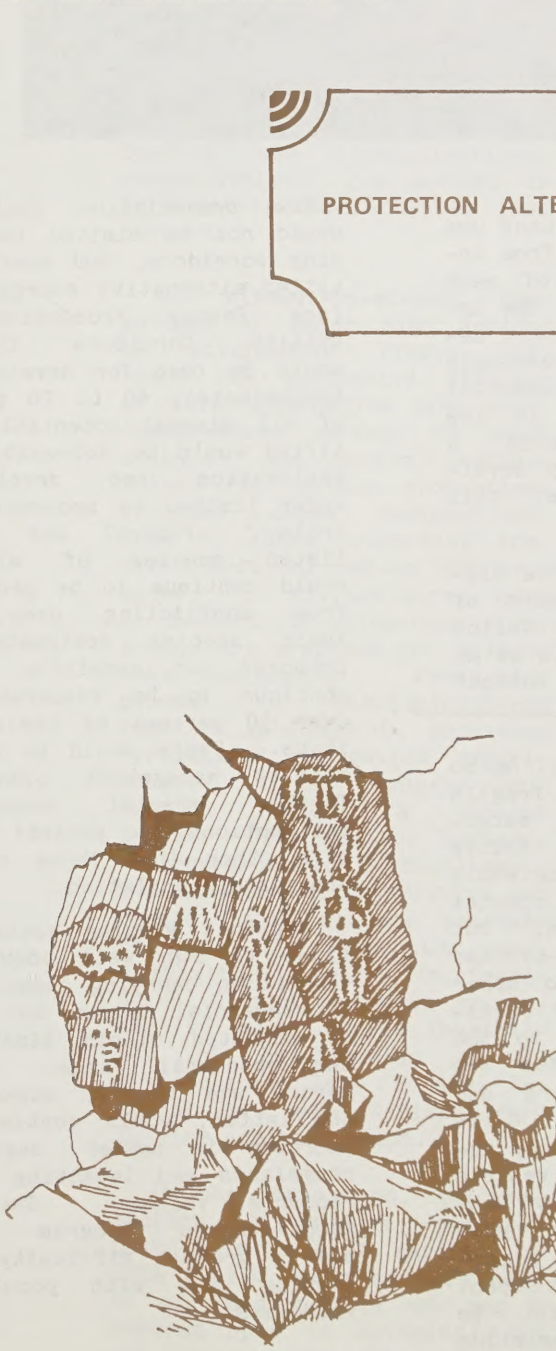
Plan Alternatives

Four alternative plan strategies are presented in the Draft California Desert Plan and analyzed in its attendant environmental impact assessment. These four alternatives are the:

NO ACTION ALTERNATIVE

PROTECTION ALTERNATIVE

BALANCED ALTERNATIVE



USE ALTERNATIVE

The origin of these alternatives, a discussion of other alternatives considered and rejected, and an explanation of how public review and comment on each will be used to shape a final proposed plan for the California Desert Conservation Area is discussed in the Plan Development section in Part I of this document. These alternatives respond to the issues of land use management in the California desert in differing ways, described as follows.

'No Action' Alternative

b-1

This alternative might be more descriptively titled, "Continue Present Management." It is a legally mandated alternative for EIS evaluation under Council on Environment Quality regulations for the National Environmental Policy Act. For some proposed land uses, such as a power plant or highway construction project, the action implied by this alternative can be a very valid management option. However, under BLM's mandate through FLPMA to implement a comprehensive land use and resource management plan for the California desert by September 30, 1980, this alternative is not in its entirety a valid option. That is not to say that some components of the No Action Alternative could not be incorporated into the final proposed California Desert Plan if it is determined that continuation of present management is the best course of action available for some facets of the plan. With its assumption of no change in present management funding and staffing capabilities, this alternative would certainly be the least expensive to implement.

The principal value of the No Action Alternative to the CDCA planning effort is to provide a benchmark by which to measure the other three action alternatives. By translating present management practices into the multiple use class designations proposed in other alternatives, a simulated land use class map of the California desert was developed reflecting present management (see the No Action Multiple Use Class Map inserted in the front cover pocket). This map shows no Class C, as no wilderness study areas have been established; 36.3 percent of BLM-administered lands receiving limited use, protective-oriented management similar to Class L; 53.6 percent managed for moderate multiple use as in Class M; 7.8 percent open to intensive, consumptive uses in Class I status, and 2.3 percent unclassified in scattered lands. The key difference between this and other alternatives is that such classifications would not guide future management, since no comprehensive, long-range plan would be established. Land use decisions would result from individual consideration of each proposed action. Since the implementation of NEPA, such decisions have been increasingly oriented towards environmental protection. However, in the absence of plan guidance, a major demand for energy development could reverse this trend.

As is apparent from the element-by-element comparisons of major plan actions that follow on Table A-2, there would be as much "action" as "no action" under this alternative.

There would, of course, be no wilderness or ACECs for fragile resource protection established. Cultural and Native American value protection would not be accomplished by special management designations, but considered on a case-by-case basis as a reaction to other proposed uses. Visitor facilities would be limited to the present one existing and two proposed visitor centers and eight campgrounds. The California desert would be very accessible to motorized vehicle use with only 5 percent of BLM-administered closed to such use. In contrast, only 5 percent would be completely open. Sixty-two percent would be available to use of existing roads and ways and 28 percent subject to designated roads and ways use. The access allowed by these designations is explained in the Motorized Vehicle Element.

New transmission facilities would not be limited to planning corridors, and most identified alternative energy areas (see Energy Production and Utility Corridors Element) would be open for development. Approximately 60 to 70 percent of all mineral potential identified would be accessible for exploration and development under limited to moderate controls. Federal and State-listed species of wildlife would continue to be protected from conflicting uses, but those species designated or proposed as sensitive would continue to be vulnerable in over 50 percent of their habitats. There would be no new habitat management plans or further special management designations to protect wildlife other than those now in process of completion.

Livestock grazing would continue to run well above the vegetation carrying capacity on the perennial ranges, but would be adjusted within limits on the ephemeral range. Wild horses and burros, expecially the latter, would continue to increase in number, degrading rangelands and impacting other resource values. The BLM Adopt-A-Burro Program would have great difficulty in keeping pace with population increases.

Finally, since a comprehensive land tenure adjustment program does not exist, State, private and Federal interests in making exchanges for common good would not be met.

Protection Alternative

b-2

The Protection Alternative is oriented towards the maximum preservation of natural and cultural values with emphasis on protecting fragile resource values and allowing use and production only at levels that do not risk diminishing such values. The multiple use class map for the Protection Alternative graphically illustrates the pursuit of this objective. About 43 percent of BLM-administered public lands are recommended for Class C, or wilderness, designation; 49 percent of the land falls in the restrictive Class L; and only 4.6 percent and 1.2 percent, fall in the moderate and intensive use classifications, respectively. 2.2 percent is in scattered unclassified land patterns.

The element-by-element comparison of major plan actions by alternative (Table A-2) shows the protective strength of this alternative even more. Ninety-seven percent of known cultural and Native American values fall within protection-oriented class designations. Some 31 ACECs protecting specific critical values are proposed. 5.2 million acres, over 91 percent of wilderness study areas, are proposed for wilderness designation. Forty-nine percent of BLM-administered land is in Class L, providing "primitive" recreation experiences. Visual resource protection follows a similar track. Five visitor centers, 13 campgrounds, 8 trailheads, and numerous interpretative and contact stations are proposed to serve the recreation uses. A subalternative in the Recreation Element proposes an intensive study of the feasibility of establishing a 1.4 million-acre East Mojave National Park under National Park Service administration.

On the other hand, the Protection Alternative proposes that less than 1 percent of CDCA public lands be left open to off-road vehicle use and 5 percent open to existing road and way use. Over 48 percent of BLM-administered public lands are accessible by designated roads only, and 43.6 percent are closed to motorized vehicle entry.

Utility planning corridors are sufficient to adequately handle future demand. Six power plant sites are available to meet minimum projected needs, while alternative energy site potential is very limited. Ninety-two percent of locatable mineral potential, 90 percent of leasable and 95 percent of saleable mineral potential is subject to stringent restrictions for exploration and development.

Multiple use class designation is favorable for protection of all Federal and State-listed wildlife species and usually 90 percent or more for sensitive and significant species. Numerous habitat management and special attention areas are proposed and some 25 ACECs covering about 279,000 acres will afford critical wildlife protection.

At about 25 percent below its present perennial level, livestock grazing is reduced to within range carrying capacity. Wild horse and burro numbers are decreased to half of present levels. Finally, an ambitious land tenure adjustment program proposes the acquisition of up to a potential 2.4 million acres to protect ACECs and consolidate ownership within wilderness areas.

Balanced Alternative

b-3

Since all alternatives are "balanced" in some degree, the titling of this alternative may seem presumptuous. It is not necessarily the best balanced alternative. Designed to provide a variety of uses within the sustained yield capabilities of the desert's resources, it represents a balancing of conflicts and tradeoffs between uses without any predetermined management philosophy other than the constraint of protecting fragile resources from irreversible decline. It does not necessarily represent BLM's preferred alternative at this point. Council on Environmental Quality regulations call for identification of a preferred alternative in the draft EIS when one can be identified. While BLM as a multiple use agency prefers some form of a balanced alternative, it feels this should not be developed until receipt and analysis of public review comments.

The multiple use class map for the Balanced Alternative illustrates the extent of that balance on an areal classification basis. About 15 percent of BLM-administered public lands are proposed for wilderness designation and protected by Class C guidelines. Forty-three percent of this land falls into the limited use Class L, 35.7 percent into moderate use Class M, and 3.4 percent in intensive use Class I. Some 2.4 percent of scattered BLM lands are unclassified and subject to management on a case-by-case basis.

The degree and character of the balance represented in this draft can be seen in the comparison of major plan actions (Table A-2).

Fifty-six percent of known cultural resources and 79 percent of Native American values occur within classes giving moderate to high protection. Thirty-one ACECs which include archaeological and Native American value are proposed.

The Recreation Element explains a classification of recreation opportunities as wilderness, primitive, natural, and concentrated, consistent with the four multiple use classes. In the Balanced Alternative, recreational opportunities fall across a spectrum of about 15 percent wilderness, 43 percent primitive, 36 percent natural, or moderately concentrated, and 3 percent concentrated. Facilities proposed include 5 visitor centers, 14 campgrounds, 3 trailheads, and 8 parking loops, plus a number of contact and interpretive points.

Motor vehicle access in this alternative varies similarly. About 2.4 percent is open to off-road use in 13 open play areas; 15.8 percent is closed to vehicle access. The remaining 79.4 percent is divided nearly equally between existing road and way areas and designated road and way areas.

Twenty transmission corridors are provided and all 6 currently approved power plant sites are in compatible classes. About half the known geothermal and wind potential power siting areas are open to development. Approximately 40 to 50 percent of known mineral resource potential on public lands is open to exploration and development under moderate controls; the remainder is subject to stringent restrictions.

The habitats of most Federal and State-listed wildlife species fall entirely within protective classifications, and, generally, from 50 to 90 percent of the habitats of sensitive and proposed sensitive species are protected by these classifications. Somewhat fewer habitat management plans and special management areas are proposed as in the Protection Alternative, and, as in all action alternatives, 25 ACECs covering nearly 279,000 acres are proposed.

Livestock grazing is curtailed to be within the carrying capacity of its perennial range, reduced about 20 percent from current allocations. Wild horse and burro populations are decreased slightly below half their present numbers, or slightly below the levels proposed for the Protection Alternative.

Up to 1.3 million acres are proposed for acquisition in this element, less than half of the potential recommended in the Protection Alternative, with its more extensive Class C area. Lands for potential disposal total about 296,000 acres, an amount which varies little in the other action alternatives.

Use Alternative

b-4

The Use Alternative focuses on meeting human demands by obtaining the highest degree of consumptive use and production that desert resources are capable of providing, while meeting all minimum environmental protection standards legally required.

The multiple use class map for the Use Alternative (inserted in the front cover pocket) illustrates the interpretation of this objective into CDCA multiple use classification. Only about 5 percent of BLM-administered public lands in the California desert are recommended for wilderness designation and 17 percent in the restrictive Class L. About 62 percent of the land is available for moderate use (Class M) and about 14 percent is in the Intensive Use Class I designation. Two and one-half percent falls in unclassified scattered land pattern areas.

An examination of the element-by-element comparison of major plan actions by alternative (Table A-2) reveals the accommodation of the Use Alternative to minimally restricted productive and consumptive uses.

Of known archaeological and Native American values in the CDCA, only 24 percent and 39 percent respectively, are afforded protective class designations, although 31 ACECs include the most critical of these values.

The recreational opportunities spectrum, described in the Recreation Element, is tilted toward the concentrated and moderately concentrated recreation uses, with only 5 percent oriented to wilderness and 17 percent to primitive recreation experience. Twenty areas, totalling over 1,300,000 acres, are open for off-road vehicle play. As with other action alternatives, five visitor centers are proposed, but 26 campgrounds and 12 parking loops are planned, often for the concentrated recreational use.

About 10.8 percent of BLM-administered public lands are completely open to vehicle use, 64.7 percent is available on existing roads and ways, 16.4 percent on designated roads and ways, and only 5.6 percent closed to vehicle entry.

With 28 utility planning corridors, this alternative provides the most options for routing transmission lines. It accommodates the 13 presently approved power plant site areas and also leaves alternative energy plant siting opportunities virtually unlimited.

Mineral resources are open to exploration and development for mineral resources may occur under moderate controls on 80 to 90 percent of public lands administered by BLM, depending on the category of mineral.

Wildlife protection afforded by Class C and L designations exists on about half the habitat of federally listed species and covers from 4 to 85 percent of the habitat of various State-listed species. Class protection afforded various designated and proposed sensitive species ranges from 9 to 59 percent.

A limited number of habitat management plans and special management areas are proposed, but, as noted previously, the 25 ACECs which include wildlife values are proposed in all action alternatives.

As in the other action alternatives, livestock grazing allocations of perennial range are reduced to fall within range carrying capacity, although by 17 percent instead of 20. Wild horse and burro populations will be more than halved, a reduction slightly greater than in the Balanced Alternative.

About 303,000 acres is proposed for potential disposal in this alternative, while some 813,000 acres are proposed for potential acquisition.

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TABULAR COMPARISON OF MAJOR PLAN ACTIONS

The table on the following pages has been extracted from individual plan elements. The format permits ready comparison of major actions by alternative, with a right hand column that briefly describes the anticipated implementation approach common to all alternatives except No Action. The continuation of present management implied by this alternative is, in effect, already implemented.

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Table A-2

COMPARISON OF MAJOR PLAN ACTIONS

Plan Action	Unit of Measure	No Action Alternative	Protection Alternative	Balanced Alternative	Use Alternative	Implementation
CULTURAL RESOURCES AND NATIVE AMERICAN VALUES						
Cultural Resource Areas (Prehistoric/Historic)	Number Total Acres (000)[a]	NA NA	133 1,009	133 1,009	133 1,009	Consideration in all management decisions upon plan adoption.
Native American Traditional Areas	Number Total Acres (000)[a]	NA NA	42 1,118	42 1,118	42 1,118	
Protection provided known Cultural Resources (areas above) under plan multiple use classes – High to Moderate Protection – Limited Protection	Percent of Identified Area	NA NA	97 3	56 44	24 76	Multiple use class guidelines prescribe degree of protection immediately upon plan adoption.
Protection provided known Native American Traditional Areas under plan multiple use classes – High to Moderate Protection – Limited Protection	Percent of Identified Area	NA NA	97 3	79 21	39 61	In the case of cultural resources in classes C and L (high to moderate protection) Cultural Resource Management Plans will be developed and implemented for specific areas within five years after plan adoption.
Archeological ACECs[c]	Number Total Acres (000)[b]	0 0	29 137	29 137	29 137	Specific boundaries delineated, management prescriptions developed and implemented within two years following plan adoption.
Native American ACECs[c]	Number Total Acres (000)[b]	0 0	8 80	8 80	8 80	
RECREATION						
Recreational Opportunities – Wilderness	Percent of BLM-administered lands	0	43.0	15.1	5.0	No Action is existing situation. In action alternatives, multiple use class guidelines govern recreational opportunities immediately upon plan adoption, although formal wilderness designation will require up to five additional years.
– Primitive	Percent of BLM-	36.3	49.0	43.4	17.0	
– Natural	Percent of BLM-administered lands	53.6	4.6	35.7	61.6	
– Concentrated	Percent of BLM-administered lands	7.8	1.2	3.4	13.9	

[a] May include private or State lands.

[b] BLM-administered lands.

[c] Many ACECs have multiple objectives and thus will appear listed under more than one resource category.

Table A-2 (cont.)

Plan Action	Unit of Measure	No Action Alternative	Protection Alternative	Balanced Alternative	Use Alternative	Implementation
Recreational Vehicle Use						
— Open Vehicle Play	Number	14	6	13	20	No Action is existing situation. Other areas are immediately available under multiple use class guidelines upon plan adoption. Use of competitive race areas is by permit for each event.
— Hill Climb Areas	Number	3	1	3	3	
— Open Sand Dunes	Number	2	2	3	4	
— Open Dry Lakes						
Motorized	Number	4	3	9	15	
Nonmotorized (only)	Number	1	4	2	0	
— Major Competitive Race Areas	Number	5	2	5	5	
Visual Resource Protection						
— High Value Visual Resources	Acres protected (000)[a]	3,000	6,300	5,000	2,400	No Action is approximate present situation with case-by-case variance. Action plan alternatives provided indicate protection levels via multiple use class guidelines upon adoption of plan.
	Percent of total high-value visual quality	47	98	78	38	
— Moderate Value Visual Resources	Acres protected (000)[a]	1,500	4,600	2,300	500	
	Percent of total moderate visual quality	31	95	48	11	
Environmental Awareness Program		Uncoordinated and piecemeal by individual initiative. No overall theme.	Systematic, coordinated, desert-wide program. Theme: "Need for resource protection."	Systematic, coordinated, desert-wide program. Theme: "Resource protection with wise use."	Systematic, coordinated, desert-wide program. Theme: "Use, but not abuse."	Phased in over life of plan, beginning upon plan adoption.
— Scientific Research	Number of centers or areas on BLM-administered lands	2	6	6	6	Two existing research centers, five additional to be developed with interested parties following plan adoption.
Significant Areas						Specific boundaries to be delineated, management prescriptions developed and implemented within two years following plan adoption.
— ACECs[c]	Number Total Acres (000)[a]	0 0	16 194	16 194	16 194	
— National Park Further Study Proposals	Number	0	1 East Mojave National Park invensive study proposed as a subalternative to BLM's low-intensity use, protective management.	0	0	If this subcomponent of the Protection Alternative is incorporated into the final California Desert Plan, further studies by NPS will commence upon plan adoption. Designation subject to outcome of such studies.

[a] May include private or State lands.

[b] BLM-administered lands.

[c] Many ACECs have multiple objectives and thus will appear under more than one resource category.

Table A-2 (cont.)

Plan Action	Unit of Measure	No Action Alternative	Protection Alternative	Balanced Alternative	Use Alternative	Implementation
Visitor Management Services and Facilities	NA	Current level of management and maintenance.	Predominantly minimal development necessary to protect resources.	Balance of facilities between minimal and developed sites.	Facilities located to accommodate the more intensive uses where allowed.	
– Visitor Centers	Number	1	5	5	5	Phased implementation over 20-year planning period following plan adoption.
– Campgrounds	Number	8	13	14	26	
– Trailheads	Number	0	8	3	0	
– Parking Loops	Number	0	4	8	12	
– Interpretive Kiosks	Number	0	9	8	5	
– Picnic/Day Use Areas	Number	0	6	9	2	
– Field Contact Stations	Number	0	4	4	1	
– Scenic Routes Designated (including present county designations)	Total Mileage	1,900	2,100	2,200	2,200	Implementation over first five years following plan adoption.
– Proposed or Designated National Trails	Number of Trails Total Mileage	1 36	3 360	3 360	3 360	
WILDERNESS						
Wilderness Suitable Areas Recommended for Designation	Number Total Acres (000)[b]	0 0	108 5,220	39 1,828	6 602	Wilderness Management Plans for proposed wilderness areas will be completed during a 2-year period following plan adoption. Proposed designations will be forwarded through the Secretary of the Interior and the President to Congress for consideration. Designations expected within five years of plan adoption.
Portion of BLM-administered CDCA Recommended for Wilderness Designation	Percent of BLM-administered lands	0	43	15	5	
Portion of CDCA Recommended for Wilderness Designation	Percent of CDCA	0	20	7	2	

[a] May include private or State lands.

[b] BLM-administered lands.

[c] Many ACECs have multiple objectives and thus will appear under more than one resource category.

Table A-2 (cont.)

Plan Action	Unit of Measure	No Action Alternative	Protection Alternative	Balanced Alternative	Use Alternative	Implementation
MOTORIZED VEHICLES						
Open to Off-road Motorized Vehicle Use	Total Acres (000)[b] Percent of BLM-administered Lands	628 5.2	93 .8	289 2.4	1,306 10.8	Effective upon plan adoption.
Existing Roads and Ways Open to Motorized Vehicle Use	Total Acres (000)[b] Percent of BLM-administered Lands	7,496 61.8	600 5.0	4,457 36.7	7,852 64.7	Effective upon plan adoption.
Designated Roads and Ways Open to Motorized Vehicle Use	Total Acres (000)[b] Percent of BLM-administered Lands	3,402 28.0	5,880 48.4	5,174 42.7	1,991 16.4	Effective upon plan adoption, but existing road and way travel permitted until designations are made. Designations will be phased in over a 7-year period based on resource sensitivity. ACEC road designations will be completed in first two years following plan adoption.
Closed to Motorized Vehicles	Total Acres (000)[b] Percent of BLM-administered Lands	605 5.0	5,284 43.6	1,914 15.8	679 5.6	Effective upon plan adoption, but use of roads identified in wilderness study allowed until management plans are completed in first two years following plan adoption.
Existing Roads and Ways Open to Motorized Vehicle Use (Interim)	Total Acres (000)[b] Percent of BLM-administered Lands	0 0	274 2.2	296 2.4	303 2.5	Effective upon plan adoption, these lands identified for potential disposal.
ENERGY PRODUCTION AND UTILITY CORRIDORS						
Planning Corridors – Energy Transmission and Utilities	Number	Not limited	15	20	28	Effective upon plan adoption, specific project proposals by application to BLM over 20-year planning period.
Approved Power Plant Sites Allowable	Number	13	6	6	13	
Microwave Communication Sites Available	Number	6	5	5	6	
Power Generator Siting Region Acreage Open to Development	Total Acres (000)[b]	Not limited	511	2,435	3,669	Decisions on individual proposals made after environmental assessment, including filing of an EIS where significant impacts are involved.

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[a] May include private or State lands.

[b] BLM-administered lands.

Table A-2 (cont.)

Plan Action	Unit of Measure	No Action Alternative	Protection Alternative	Balanced Alternative	Use Alternative	Implementation
ENERGY PRODUCTION AND UTILITY CORRIDORS (cont)						
Potential Wind Generation Site Acreage Open to Development	Total Acres (000)[b]	77	13	37	77	
Geothermal Power Generation Acreage Open to Plant Siting	Total Acres (000)[b]	194	26	100	194	
MINERAL EXPLORATION AND DEVELOPMENT						
Locatable Mineral Potential						Effective upon adoption of plan. Environmental assessment, or EIS in the case of most stringent restriction areas, applied upon filing of plan of operations.
– Moderate Controls on Exploration and Development	Acres (000)[a]	2,895	436	1,856	3,731	
	Percent[c]	60	8	38	79	
– Stringent Restrictions on Exploration and Development	Acres (000)[a]	1,901	4,560	3,050	995	
	Percent[c]	40	92	62	21	
Leasable Mineral Potential						Protective measures and mitigation measures prescribed based on environmental assessment. On leasables and saleable, can lead to decision not to lease or sell, especially in stringent restriction areas.
– Moderate Controls on Exploration and Development	Acres (000)[a]	3,416	518	2,443	4,106	
	Percent[c]	70	10	51	86	
– Stringent Restrictions on Exploration and Development	Acres (000)[a]	1,482	2,718	1,941	545	
	Percent[c]	30	54	41	12	
– New Leases Not Issued	Acres (000)[a]	0	1,793	380	90	
	Percent[c]	0	36	8	2	
Saleable Material Extraction Areas						Protective measures and mitigation measures prescribed based on environmental assessment. On leasables and saleable, can lead to decision not to lease or sell, especially in stringent restriction areas.
– Subject to Moderate Controls	Acres (000)[a]	303	26	205	460	
	Percent[c]	61.2	5	42	91	
– Subject to Stringent Restrictions	Acres (000)[a]	192	354	275	28	
	Percent[c]	39	72	55	6	
– New Sales Not Made	Acres (000)[a]	0	111	17	13	
	Percent[c]	0	23	3	3	

[a] May include private or State ...

[a] May include private or State lands. [b] BLM-administered lands. [c] Percent of identified potential within multiple use class designation.

Table A-2 (cont.)

Plan Action	Unit of Measure	No Action Alternative	Protection Alternative	Balanced Alternative	Use Alternative	Implementation
WILDLIFE						
Federally Listed Threatened and Endangered Species Critical Habitat						
Fish and Amphibians						
– In protection-oriented classes or current management	Acres (000)[a] Percent	<0.1 50	< 0.2 100	<0.2 100	<0.1 50	Effective upon plan adoption.
– In use-oriented classes or present management	Acres (000)[a] Percent	<0.1 50	0 0	0 0	<0.1 50	
State-listed Rare Species Habitat						
Fish and Amphibians						
– In protection-oriented classes or present management	Acres (000)[a] Percent	22 88	26 100	26 100	19 76	Effective upon plan adoption.
– In use-oriented classes or present management	Acres (000)[a] Percent	3 12	0 0	0 0	6 24	
Peninsular Bighorn Sheep						
– In protection-oriented classes or present management	Acres (000)[a] Percent	192 100	160 100	144 96	144 85	Effective upon plan adoption.
– In use-oriented classes or present management	Acres (000)[a] Percent	0 0	0 0	6 4	26 15	
Other						
– In protection-oriented classes or present management	Acres (000)[a] Percent	384 29	1,216 84	544 40	64 4	Effective upon plan adoption.
– In use-oriented classes or present management	Acres (000)[a] Percent	960 71	240 16	832 60	1,408 96	

[a]May include private or State lands.

Table A-2 (cont.)

Plan Action	Unit of Measure	No Action Alternative	Protection Alternative	Balanced Alternative	Use Alternative	Implementation
WILDLIFE (cont.)						
Sensitive Species Habitat						
Fish and Amphibians						Effective upon plan adoption.
– In protection-oriented classes or present management	Acres (000)[a] Percent	13 17	80 100	64 91	38 59	
– In use-oriented classes or present management	Acres (000)[a] Percent	64 83	0 0	6 0	26 41	Effective upon plan adoption.
Desert Tortoise						
– In protection-oriented classes or present management	Acres (000)[a] Percent	1,408 42	3,200 93	1,600 47	320 9	Effective upon plan adoption.
– In use-oriented classes or present management	Acres (000)[a] Percent	1,984 58	256 7	1,792 53	3,072 91	
Desert Bighorn Sheep						
– In protection-oriented classes or present management	Acres (000)[a] Percent	1,472 50	2,752 98	2,368 74	1,280 40	Effective upon plan adoption.
– In use-oriented classes or present management	Acres (000)[a] Percent	1,472 50	64 2	832 26	1,920 60	
Other						
– In protection-oriented classes or present management	Acres (000)[a] Percent	2,304 52	3,968 92	3,200 69	1,280 28	Effective upon plan adoption.
– In use-oriented classes or present management	Acres (000)[a] Percent	2,112 48	352 8	1,408 31	3,328 72	
Significant Species Habitat						
Fish and Amphibians						
– In protection-oriented classes or present management	Acres (000)[a] Percent	0 0	10 100	10 100	6 86	Effective upon plan adoption.
– In use-oriented classes or present management	Acres (000)[a] Percent	10 100	0 0	0 0	1 14	

[a] May include private and State lands.

Table A-2 (cont.)

Plan Action	Unit of Measure	No Action Alternative	Protection Alternative	Balanced Alternative	Use Alternative	Implementation
WILDLIFE (cont.)						
Significant Species Habitat (cont.)						
Endemic Dune Beetles						
– In protection-oriented classes or present management	Acres (000)[a] Percent	64 40	208 89	144 64	51 24	Effective upon plan adoption.
– In use-oriented classes or present management	Acres (000)[a] Percent	96 60	26 11	80 36	160 76	
Other						
– In protection-oriented classes or present management	Acres (000)[a] Percent	2,304 51	5,184 92	4,288 71	1,408 27	Effective upon plan adoption.
– In use-oriented classes or present management	Acres (000)[a] Percent	2,240 49	464 8	1,728 29	3,840 73	
Federally Listed Threatened and Endangered Species						
Managed by HMP[b]	Number Acres (000)[a]	2 <0.1	2 <0.1	2 <0.1	2 <0.1	Existing HMPs in effect.
State-listed Rare Species						
Managed by HMP	Number Acres (000)[a]	1 196	2 254	1 196	1 196	New HMPs for federally listed species implemented within three years of plan approval.
Managed by ACEC[c]	Number Acres (000)[a]	1 <0.1	1 <0.1	1 <0.1	1 <0.1	New HMPs for State-listed and BLM sensitive species implemented within five years of plan approval.
BLM Sensitive Species						ACECs implemented within two years of plan approval.
Managed by HMP	Number Acres (000)[a]	1 25	5 2,074	4 966	0 0	
Managed by ACEC	Number Acres (000)[a]	1 25	1 25	1 25	1 25	

[a] May include private and State lands.

[b] Habitat Management Plan.

[c] Many ACECs have multiple objectives and thus will appear under more than one resource category.

Table A-2 (cont.)

Plan Action	Unit of Measure	No Action Alternative	Protection Alternative	Balanced Alternative	Use Alternative	Implementation
WILDLIFE (cont.)						
Proposed BLM Sensitive Species						Wildlife Wilderness Management Plan components implemented within five years of plan approval.
Managed under Wilderness Management Plan	Number	0	24	13	5	
	Acres (000)[a]	0	1,058	686	430	
Managed by HMP	Number	0	22	19	11	HMPs for proposed sensitive species implemented within five years of plan approval.
	Acres (000)[a]	0	1,315	949	285	
Managed by Road Designation Restrictions	Number	0	1	1	0	Road Designation Restrictions implemented within seven years of plan approval.
	Acres (000)[a]	0	90	90	0	
Managed by ACEC[c]	Number	0	17	17	17	ACECs implemented within two years of plan approval.
	Acres (000)[a]	0	251	251	251	
Special Habitat Areas						
Other Species						Wildlife components of Wilderness Management Plans implemented within five years of plan approval.
– Managed under Wilderness Management Plans	Number	0	13	3	2	
	Acres (000)[a]	0	355	126	52	
– Managed by HMP	Number	2	11	11	5	HMPs implemented within five years of plan approval.
	Acres (000)[a]	200	1,477	1,122	367	
– Managed by Road Designation Restrictions	Number	0	14	12	3	Road Designation Restrictions implemented within seven years of plan approval.
	Acres (000)[a]	0	498	267	14	
– Managed by Special Attention Designation	Number	0	9	18	30	Special Attention Designations effective upon plan approval.
	Acres (000)[a]	0	444	1,174	2,122	
– Managed by ACEC[c]	Number	0	19	19	19	ACECs implemented within two years of plan approval.
	Acres (000)[a]	0	202	202	202	
VEGETATION						
Threatened and Endangered Plants						
In protection-oriented classes or present management	Percent[b]	42	87	76	36	Effective upon plan adoption.
In use-oriented classes or present management	Percent[b]	58	13	24	64	

[a] May include private or State lands.

[b] Percentage of known populations of 144 Rare, Threatened and Endangered plants falling within protection or use oriented management classes.

[c] Many ACECs have multiple objectives and thus will appear under more than one resource category.

Table A-2 (cont.)

Plan Action	Unit of Measure	No Action Alternative	Protection Alternative	Balanced Alternative	Use Alternative	Implementation
LIVESTOCK GRAZING AND WILD HORSE AND BURRO						
Perennial Range						
Allotments	Number	35	10	10	10	Implementation of allotment revisions and adjustments in grazing allocations will be undertaken in the first grazing season following plan adoption but some adjustments may be phased in up to five years.
Area Grazed	Acres (000)[a]	2,994	361	361	361	
Ephemeral/Perennial Range						
Allotments	Number	0	28	29	29	
Area Grazed	Acres (000)[a]	0	2,730	2,748	2,748	
Ephemeral Range						
Allotments	Number	19	23	28	28	
Area Grazed	Acres (000)[a]	1,189	1,551	1,771	1,771	
Estimated Perennial Vegetation Carrying Capacity	AUMs	95,900	95,900	95,900	95,900	
Total Livestock Perennial Grazing Authorization	AUMs	102,100	74,700	79,200	83,100	
Total Perennial Vegetation Allocation to Wildlife	AUMs	4,500	5,600	5,600	5,000	Allocations to wildlife and wild horses and burros become effective upon plan adoption. Wild horse and burro reductions to allocation levels phases in as rapidly as funding permits. As noted – ephemeral grazing allocations will be set annually.
Total Perennial Vegetation Allocation to Wild Horses and Burros within Grazing Allotments (includes Ephemeral/Perennial Type)	AUMs	59,100	13,800	10,900	7,200	
Ephemeral Vegetation Allocated to Livestock Grazing	AUMs	Variable[b]	Variable[b]	Variable[b]	Variable[b]	
Ephemeral Vegetation Allocated to Wildlife	AUMs	2,200	4,900	3,800	3,000	
Ephemeral Vegetation Allocated to Wild Horses and Burros	AUMs	1,800	0	0	0	

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[a] May include private or State lands.

[b] Ephemeral Livestock Allocations to be determined annually after 200 pounds per acre annual production. In the past, such allocations have varied from 0 to 100,000 AUMs.

Table A-2 (cont.)

Plan Action	Unit of Measure	No Action Alternative	Protection Alternative	Balanced Alternative	Use Alternative	Implementation
WILD HORSE AND BURRO MANAGEMENT						
Herd Management Areas						
Wild Horses	Number	7	6	6	6	Wild horse and burro herd reductions will be initiated upon plan approval and, in view of the overstocking problem, will proceed as quickly as funding will permit.
Wild Burros	Number	31	26	26	26	
Total HMA Area (overlaps cattle grazing allotments)	Acres (000)[a]	3,506	2,731	2,731	2,731	
Wild Horse Forage Allocation	AUMs	8,900	4,300	4,000	3,700	
Wild Burro Forage Allocation	AUMs	105,500	46,000	43,200	39,800	
Total Wild Horses	Number	750	360	330	310	
Total Wild Burros	Number	8,800	3,800	3,600	3,300	
LAND TENURE ADJUSTMENT						
Potential acquisition by BLM to obtain wilderness area inholdings, consolidate ACEC protection and obtain management efficiency[b]	Acres (000)[a]	0	2,378	1,263	813	Upon plan adoption, acquisitions and disposals will be made, wherever possible, by exchange. ACEC protection will be usually given first priority for acquisition, followed by wilderness consolidation. First priority for disposal will be conflict abatement. However, large exchange package efforts will often supercede individual case-by-case priorities. Goal is to complete basic tenure adjustment in 20 years.
Potential disposal to private, State, or local government to reduce conflicts, simplify management, and accommodate valid needs	Acres (000)[a]	0	274	296	303	

[a] May include private and State lands.

[b] Potential acquisition and disposal would be primarily by exchange for equal values.

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● COMPARISON OF ALTERNATIVES ● AS THEY ADDRESS THE ISSUES

The foregoing tabulation of plan actions by alternative succinctly compares the similarities and differences between the plan alternatives. To supplement and reiterate the narrative discussion of the four plan alternatives which preceded this table, the following table of multiple use class designations is provided. This class distribution, shown in terms of acreages and percentage of BLM-administered land in the CDCA, is the foundation of this plan in each of its alternatives and the guide to future actions. A discussion of how the various alternatives respond to the major California desert land use issues follows this table.

Table A-3

MULTIPLE USE CLASS DESIGNATIONS UNDER FOUR ALTERNATIVE PLANS FOR THE CALIFORNIA DESERT CONSERVATION AREA

Multiple Use Class	Acres (000)				Percent			
	No Action Alternative	Protection Alternative	Balanced Alternative	Use Alternative	No Action Alternative	Protection Alternative	Balanced Alternative	Use Alternative
C		5,221	1,828	602		43.0	15.1	5.0
L	4,406	5,943	5,262	2,067	36.3	49.0	43.4	17.0
M	6,505	552	4,326	7,470	53.6	4.6	35.7	61.6
I	943	141	419	1,688	7.8	1.2	3.4	13.9
No Specified Multiple Use Class	277	274	296	304	2.3	2.2	2.4	2.5
Total	12,131	12,131	12,131	12,131	100	100	100	100

Many people note that protection of the natural environment is the driving force which established the California Desert Conservation Area. In terms of the broad land classifications, the No Action Alternative generally protects natural values on 36 percent of the CDCA; the Protection Alternative, on 92 percent; the Balanced Alternative, on about 58 percent; and the Use Alternative, on about 22 percent. However, the Use Alternative shares with the two other action alternatives one environmental protection feature that the No Action Alternative lacks -- the establishment of 50 Areas of Critical Environmental Concern which protect the most vulnerable natural and cultural resources on about 382,000 acres. The provisions of the Wildlife Element provide the most apparent example of this range of protective management between alternatives.

Protection of archaeological-historic resources and Native American values is also an issue for which action is proposed. In the No Action Alternative this protection occurs in a piecemeal manner, as a reaction to each proposed land use action. Under the guidelines of a long-range plan, the amount of identified high-risk values which fall into protective classes varies from 24 percent to 97 percent between the Use and Protection Alternatives. In the Balanced Alternative, the degree of protection afforded these values is closer to that of the Protection Alternative than to the Use.

The issue of wilderness designation has been debated intensely, often passionately. How much wilderness is enough? The three action alternatives respond with widely varying amounts of Class C. The 5.2 million acres proposed in the Protection Alternative is about nine times that in the Use Alternative's 602,000 acres and triple the Balanced Alternative's 1.8 million acres.

Many people strongly advocate the preservation of the scenic values, vast open space, and silence of the California desert. Since Wilderness (Class C) and Limited Use (Class L) are harmonious with preservation of these characteristics, the distribution of classes in Table A-3 at the beginning of this section readily shows how each alternative meets this issue.

The problem of how much of the California desert should be kept open to mineral and energy exploration and development has been viewed by some people as the other side of the wilderness coin. This resource use, however, is also affected by nonwilderness restrictions that limit but do not preclude mineral exploration and development. The Use Alternative responds most favorably to this activity by only moderately controlling about 80 to 90 percent of the area in which potential mineral deposits occur on public lands. The Protection Alternative reverses those percentages, and the Balanced Alternative moderately controls exploration of 40 to 50 percent of the CDCA's mineral potential and more strictly regulates the rest.

As the Desert Plan took shape, it became apparent that BLM would not dramatically influence utility corridors and power plant siting in the CDCA. Since, for the most part, utility corridors were already in place, the plan was essentially 10 to 20 years too late to influence the siting of most of them. Similarly, 13 power plant sites have been already approved by the California Energy Commission and information on energy demand indicates that only a portion of them will ever be used in the next 20 years. The plan alternatives do provide different plant siting options and varying degrees of flexibility and options for power transmission line placement in a number of planning corridors.

The proper balance of recreation use between intensive, active uses and quiet, contemplative uses has been a traditional desert debate. In terms of the recreation opportunities spectrum mentioned earlier, the availability of these differing experiences ranges from 92 percent wilderness and primitive use recreational opportunities in the Protection Alternative to the 74 percent natural, moderately concentrated uses and concentrated use opportunities in the Use Alternative. The Balanced Alternative leans toward the primitive side of this spectrum, with 58 percent. Development of services and facilities varies somewhat by alternative, but is generally kept low in view of often expressed public desires to recreate without them.

Many consider motorized vehicle use as the central recreation issue. Viewed from an access rather than a play aspect, this use is an issue among many desert users, such as mineral interests. The No Action Alternative, with its "Interim Critical Management Plan" (ICMP) for vehicle use, provides a basis of comparison. The ICMP divides desert lands into 5 percent open for off-road vehicle use, 5 percent closed to all vehicle use, and 90 percent permitted on existing or designated roads and ways. Motorized vehicle users in a desert under the Protection Alternative would find it about 1 percent open, 44 percent closed, and 55 percent available for existing or designated road and way use. The Use Alternative leaves the BLM-administered lands 11 percent open, 6 percent closed and the remainder available on existing or designated roads and ways. The Balanced Alternative allows about 2-1/2 percent open, 16 percent closed, and 82 percent existing or designated road and way use, showing a shift towards closure since the ICMP, mainly because of wilderness proposals.

How much cattle and sheep grazing should be allowed is a problem posed to CDCA planners. The answer in all three action alternatives is less than presently allowed. This activity is reduced by about 17 to 25 percent on the allocated perennial forage which is currently allocated, if not grazed, beyond its capacity. Ephemeral range for all alternative plans in the annual capacity in response to rainfall patterns. There is little variance between alternatives, as competition between wildlife and cattle for the forage itself was not as important as variations in timing and restrictions in specific areas.

The management of wild horses and burros presents a dilemma. These animals are protected species under law, but herd management to keep populations within the range's carrying capacity is permitted. It was found that they were presently seriously overstocked and reducing their numbers by half is necessary under each alternative. Slightly more horses and burros are supported at the expense of cattle allocations under the Protection Alternative; somewhat less are supplied under the Balanced and Use Alternatives to allow more livestock production. The dilemma is that these animals, especially burros, are environmentally damaging in ways other than forage use; for example, they drive other wildlife from watering areas and damage cultural resource values. Therefore, it could also be argued that there should be fewest of this protected species allowed under the Protection Alternative.

Land tenure adjustment has not been a major issue in the California desert. However, there has been a recognized need for adjustments to satisfy State of California interests in exchanging its scattered School Land grants on the desert and the Southern Pacific Railroad Company's desire to trade its far flung "checkerboard" on the desert public lands for lands more suitable for commercial investment. As well as addressing these desires, the land tenure adjustment alternatives allow BLM to support whatever Wilderness and ACEC programs it adopts through the securing of private and State government holdings for better management of these values. Meanwhile, opportunities will be sought to dispose of public lands more appropriate to private and local government needs or which may be creating conflict with such needs due to the uses open to the public on such tracts.

b-7

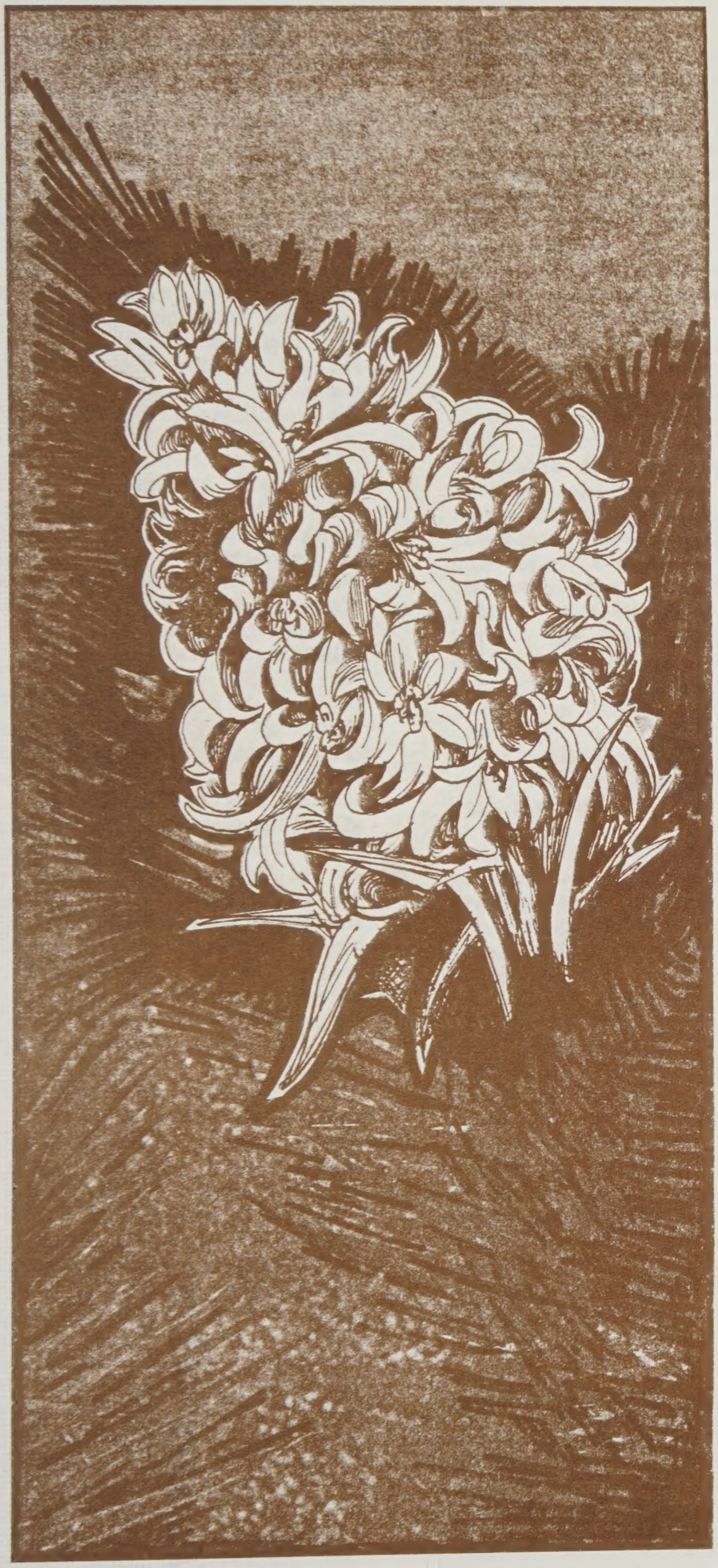
SUMMARY

CDCA PLANNING UNITS

To simplify both the planning effort and the analysis of its results, the CDCA is divided into 107 planning units. These are outlined in red on the multiple use class maps (see front cover pocket). National monuments, military bases, and areas of predominantly non-BLM-administered land are not included within these units. The nature and condition of resources and associated activities found within each planning unit and other criteria mentioned in section I-d-3 determined a multiple use class designation consistent with the objectives of the plan alternative.

part II-c

Plan Elements



Plan Elements

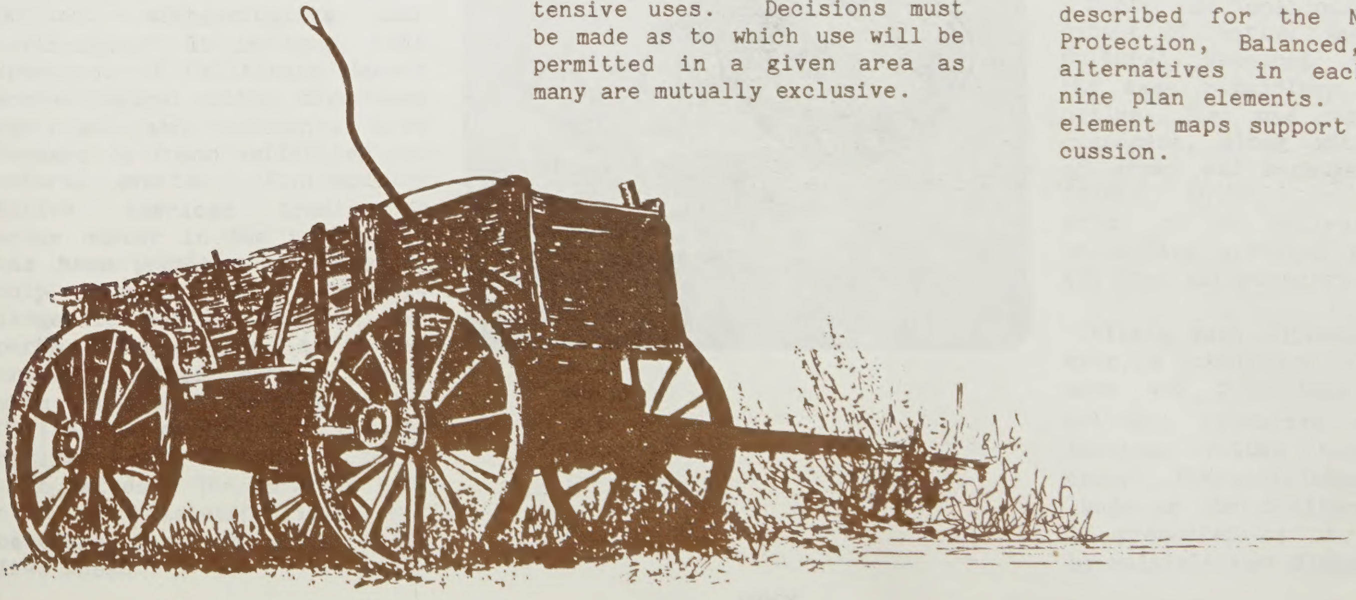
The elements present plan decisions regarding the issues of resource management significance and public concern. Each of the nine elements provides a desertwide perspective of the planning decisions for one major resource or issue. The element also provides more specific application or interpretation of multiple use class guidelines for a given resource and its associated activities.

In many instances the element decisions are simply a restatement of the multiple use class designations and their applied guidelines. However, application of multiple use class designations and guidelines do not always give clearly defined decisions for use by managers. It is a fundamental character of multiple use management that conflicts must be resolved and tradeoffs in use be made.

The zoning of the California Desert Conservation Area into four multiple use classes, each with its own set of guidelines, reduces but does not eliminate the need for further conflict resolution in decision making. Two or more uses may be fully consistent with the guidelines for a particular multiple use class but totally incompatible with each other in the same area at the same time. Such residual conflicts are most limited in Class C with its dedication to wilderness preservation. They increase, however, in Class L, where judgment is called for in allowing consumptive uses up to the point that sensitive natural and cultural values are not impaired. Class M by definition calls for subsequent tradeoffs between a number of acceptable uses. Even Class I, which is designed to permit intensive and usually single uses is open to a number of such intensive uses. Decisions must be made as to which use will be permitted in a given area as many are mutually exclusive.

The planning element therefore has a more difficult job than simply summing up the effect of multiple use class allocations. It must try to resolve residual conflicts under the broader guidelines or set up procedures for resolving such conflicts as they are later identified during use of the plan.

Each element begins with a section which describes the background of the activity or resource which requires this more concentrated attention, and the relationship of the protection or use of this resource to the issues of desert land use management. The methods of resolution used are described in the Approach Section of the element. The application of these methods is then discussed for each alternative, with the background and relationship to issues, objectives, and element components described for the No Action, Protection, Balanced, and Use alternatives in each of the nine plan elements. Tables and element maps support this discussion.



C-1
Cultural Resources and Native American Values

BACKGROUND and ISSUES

Cultural resources have scientific, humanistic, heritage, educational, and interpretive/recreation value. A number of locations, including both archaeological sites and natural areas, are of particular and unique importance to the religion or traditions of Native Americans. Cultural resources and values in the California desert have been subjected to continuing degradation due to both human and natural means. National, State, and local polls undertaken by BLM contractors have demonstrated that the public places a high value on the preservation, protection, and scientific study of these irreplaceable and often fragile remains and values. The special management attention required by these unique resources is manifested in the cultural resource program through the development of protective strategies, research, scientific recovery, stabilization, ranger patrols, and review of BLM management activities by the State Historic Preservation Officer, the Advisory Council on Historic Preservation, and Native American groups.

To date over 12,000 archaeological historical sites have been recorded in the California desert and no doubt more than 100,000 are present. However, only about 5 percent of the California desert has been examined by professional and avocational archaeologists and historians. It is known that thousands of California desert archaeological sites have been destroyed and thousands more damaged by human activities and natural events. Contemporary Native American traditional areas number in the scores; it has been possible to interview only a small number of knowledgeable Native American experts with regard to these areas. Other ethnic groups with a historic presence in the California desert may possess similar areas of special heritage values. The relative paucity of completed field work bespeaks research which still lies ahead.

Because cultural resources are often susceptible to damage or destruction through unintentional activities or purposeful vandalism or looting, their protection and preservation is often very difficult to secure. Similarly, disclosure of their location to the general public increases the risk of damage, desecration, or destruction by uncaring persons. For these reasons, the identification of sensitive and significant cultural resources as an ACEC or as an area addressed specifically in a plan element was carefully weighed in terms of the benefits the resources might accrue in comparison to the risks of public exposure and potential impacts.

APPROACH

The Cultural Resources element consists of two components, representing: 1) scientific and humanistic historic/prehistoric values, and 2) the cultural values of Native American people. These components are not, however, mutually exclusive in all cases. Throughout the text these components are treated simultaneously to simplify presentation.

These values are compared and contrasted with the management needs and recommendations of other resources to illuminate the potential conflicts and impacts which this element attempts to resolve.

Tabular summaries of the resources identified for both components are presented in association with each plan alternative. As indicated on the Cultural Resources Element Map and the Native American Element Map, the element areas, or polygons, for both the Native American and Cultural Resource components are the same for all plan alternatives. The polygons reflect the distribution of the most sensitive and significant known cultural resources and values only where risks are deemed highest. It is important to note that only these resources where they occur in areas of high potential impact are depicted on the component maps.

Since the locations and areal extent of Native American and Cultural Resource values are the same regardless of alternative, just one map for each component, along with a table of areas and acreages involved (Table CN-1), is presented prior to an analysis of the protection afforded by each of the four alternatives.

Within each alternative, however, a tabulation of the acreages and percentage of known cultural resources and Native American values occurring on desert BLM-administered public lands in the California desert is presented as it is divided by multiple use class. The degree of protection provided by each multiple use class, as its areal extent varies for each alternative, is then discussed. The exception is the No Action Alternative, which has class designations only to illustrate present management. This is simply treated narratively.

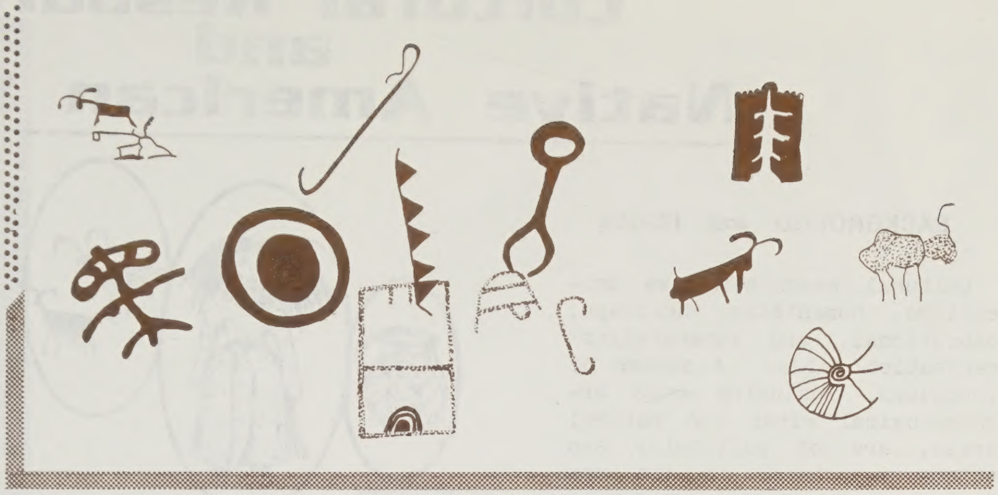
It may be noticed that there are minor differences in total acreage between the various alternative tables; this occurs because, as mentioned above, only values subject to significant risk are treated. As class distribution and location changes between alternatives, some Native American and cultural resources drop out of a high risk category and, therefore, out of the tabulation, while other areas may enter the risk category tabulation. For example, an underground archaeological site located in Class C in one alternative would not be considered highly vulnerable to damage, as it might be under Class M in another alternative (see Tables CN-2, CN-3, and CN-4).

Finally, Table CN-5 shows the percentage distribution of cultural and Native American value risk-sensitive areas within each multiple use class in each of these three alternatives. A narrative comparison of the risk and protection associated with each alternative then concludes the element.

Implementation Assumptions

These assumptions apply to the three action alternatives under which multiple use class guidelines are established to govern future management and specific management actions are prescribed. The No Action implementation assumptions are discussed separately under that alternative.

The two maps showing Cultural Resource Areas and Native American Traditional Areas encompass general areas of such known values where special management efforts, consistent with multiple use class designations, will be made to protect cultural and Native American resources. In classes C and L, control of public access and specific limitations on resource use and development activity will be used to protect cultural and Native American resources. In classes M and I the efforts will rely more heavily on mitigation. Protection of cultural resource values not now specifically identified will be protected on a case-by-case basis according to class guidelines.



Where conflicts develop between various uses and archaeological, historical and Native American values and resources, these, along with sensitive natural values, will be given priority for preservation and protection in classes C and L. Where avoidance of impacts is impossible, fullest possible mitigation will be undertaken in classes M and I. Such mitigation must follow 36 CFR 800 guidelines. In brief, these guidelines are procedures established by the Advisory Council on Historic Preservation for compliance with the National Historic Preservation Act of 1966 and the National Environmental Policy Act of 1969. These guidelines are intended to insure maximal consideration for cultural resources in the early stages of activity and protection planning. They are published in the Federal Register, Volume 40, Number 4, Part II. Further description of these guidelines is provided in Appendix 1, "Summary of Laws and Policy".

In the case of Native American traditional areas, other ethnically significant locations, and some archaeological sites, consultation will be undertaken with appropriate Native American traditionalists, religious leaders and elders, or other ethnic groups. In some cases, mitigation of impacts to resources of cultural value will not be possible and the adverse effects on these value systems must be evaluated as a cost of the impacting activity.

Within all classes, ACECs will be managed for the protection of the resource. Cultural resource and Native American traditional areas will be protected through ACEC designations, complemented by special management within the Cultural Resource and Native American Element areas. In classes C and L, control of public access within these areas will be employed to limit use and development activities. The protection of cultural and Native American resources not now specifically identified will be conducted on a case-by-case basis according to the class guidelines. Within all classes, National Register properties and the element areas shown on the Cultural Resources Element and Native American Element Maps will be managed at the lowest level of allowable intensity of use consistent with class guidelines. 36 CFR 800 procedures will be applied in all cases to insure the protection or proper mitigation of historic and other cultural resource properties.

A research management program will also be instituted as an aspect of plan implementation. Such a program will provide opportunities for directed research and future support for the study and management of prehistoric, historic, and contemporary cultural resources and values.

In classes C and L, cultural resource element areas will, after final plan approval, be further designated into one or more of the three special management areas listed below. Special prescriptions will be developed for each area in the form of a Cultural Resource Management Plan. The three types of special management areas are:

❶ Archaeological-Historical Resource Area. These areas will include all of the cultural values in an area and, in some cases, may provide a buffer to the Preservation Areas described below. Included here will be important associated environments related to human uses. This area will provide for continuing archaeological-historical research and education, and interpretation for the public of ongoing cultural resource research. The management of this area may involve limitations on other uses which are generally nonintensive, but which are consistent with multiple use class guidelines.

❷ Public Interpretive Use Areas. Within the larger archaeological-historical resource areas, such facilities as access corridors, interpretive tracts and displays, trailheads, and visitor centers or information stations may be established. These areas will be managed in conjunction with an aspect of the Visitor Interpretive Program (see Recreation Element).

❸ Archaeological-Historical Preservation Areas. If they occur within Class C, these areas may be either closed to public entry or have access carefully controlled by such measures as a permit system with close supervision. These measures will be developed in Wilderness Management Plans (see Wilderness Element). In Class L, these areas and similar ones open to limited general public use will, in some cases, have cultural resources reserved or placed in a data bank for use by future scientists with more sophisticated investigative techniques. Cultural resource research will only be allowed where danger to the resource is imminent or research is deemed highly important. Such areas will be reviewed periodically, at least every 10 years.

In addition to establishment of these special areas, management procedures will be followed to:

a. Limit distribution and availability of specific site data and access to sensitive locations of Native American, prehistoric, and historic resources and values, while providing access to traditional areas for Native peoples. Traditional Native American use, including collection and ritual and religious use, will be continued. Guidelines for the protection of traditional Native American religious sites will be developed in cooperation with traditionalists, religious leaders, and elders from the relevant Native American group(s).

b. Stabilize or restore prehistoric and historic resources where appropriate and feasible.

c. Establish a research management program that provides directed research opportunities and support for the present and future study of prehistoric and historic resources.

Monitoring

Two complementary procedures will be undertaken to monitor the status of the known or predicted resources and values. A sample inventory of cultural resource element areas will be undertaken annually. When and where feasible, other little known areas will be periodically inventoried. This field reconnaissance will be undertaken in addition to specific inventory and analysis projects. Such work will determine if significant changes are occurring in the resource base. Analysis of this data will concentrate on determining patterns of impact and updating management guidelines in response to changing needs and conditions.

Because the nature of cultural resource distributions and their susceptibility to impact varies widely, several area and resource-specific monitoring programs are envisioned. Under such programs, small, well-defined study sites (plots) and regions will be established to represent the various cultural resource site types and complexes. These study areas will be monitored to determine the magnitude of impacts occurring from the full range of uses, activities, and conditions within the CDCA. Recorded impacts have resulted from free-ranging burros, ORV activities, grazing, pedestrian recreational use, mining and energy development, etc.

Ongoing coordination with Native American groups shall serve as an additional means of refining and revising the management guidelines for areas of traditional Native American value. This coordination shall focus on the development of a data base for areas of potential and probable impact, identifying specific concerns and incorporating these concerns into management consideration of endangered resources.

Table C/N-1

AREAL EXTENT OF CULTURAL RESOURCE AREAS AND NATIVE AMERICAN TRADITIONAL AREAS

Area Type	Total Number	Total Acres (000)	Size (acres) Smallest (000)	Largest (000)
Archaeological ACECs	29	137	.06	24
Native American ACECs	8	80	2.6	24
Cultural Resource areas (Prehistoric-Historic)	133	1,009	30	100
Native American Traditional Areas	42	1,118	4	119

CULTURAL RESOURCES / NATIVE AMERICAN VALUES

Plan Alternatives

● NO ACTION ALTERNATIVE ●

Relationship to Issues

Assuming a continuation of present management levels, practices, and policies, these guidelines are designed to aid in the protection and maintenance of cultural resources and Native American values in the California Desert Conservation Area. This alternative seeks to preserve and protect these resources, consistent with existing law and policy.

Objective

To maintain the present level and integrity of historic, prehistoric, and Native American resources and values. This will be pursued under current capabilities and authorities by applying, on a case-by-case basis, the requirements of existing law and policy to existing programs.

Implementation Assumptions

There will be no multiple use class designations to guide management or prescribe protection. However, management will be guided by BLM manual 36 CFR 800 procedures, other applicable antiquities policy and law, and the sensitivities of traditional Native American values which fall within the purview of P.L. 95-341-American Indian Religious Freedom Act of 1978 (see Appendix 1).

The protection and preservation of cultural resources and values will be judged both on a case-by-case basis, depending on the nature of the impacting action, and within the framework of the present cultural resource management program.

This reactive posture generally precludes a program directed at the cultural resources and values themselves. In most instances, cultural resource specialists will respond to vandalism, desecration, and indiscriminate use of these resources, seeking mitigation where possible and protection as necessary.

Where activities are permitted, protection stipulations will be included in the permits. These stipulations can include actual recovery as a last resort. In all actions, 36 CFR 800 procedures will be followed. Specific project review of all proposed permitted activities will include consultation with knowledgeable Native American traditionalists from appropriate ethnic groups and subgroups. Native Americans will be contacted to solicit mitigation recommendations. In some cases there may be no satisfactory mitigation possible.

Every attempt will be made to avoid impacts on cultural resources and the values of relevant ethnic groups.

● PROTECTION ALTERNATIVE ●

Relationship to Issues

The Protection Alternative is intended to respond to public concerns for preserving and protecting cultural values by providing the strongest possible preservation and protection guidelines. The management of resources will concentrate on storehousing archaeological and historical resources and protecting the sensitive traditional sites and areas of Native American value for their continuing use.

> "Prehistoric artifacts are an integral part of the desert, and deserve the highest priority and prompt action for protection and understanding."

Objective

To minimize the exposure of cultural resources and values to all potential damaging uses, activities, and events. Land tenure shall be adjusted where practical and possible to increase resource protection. Cultural resource management areas will be established to protect prehistoric and historic resources and Native American values.

Element Components

Table CN-2 presents the distribution of multiple use class coverage under the Protection Alternative for sensitive cultural resources and Native American values.

Table C/N-2

PROTECTION ALTERNATIVE – DISTRIBUTION OF CULTURAL RESOURCES AND NATIVE AMERICAN VALUES BY MULTIPLE USE CLASS

	Known and Predicted Cultural Resources[a]		Known Native American Values[a]	
Class	Acreage (000)	Percent of Total	Acreage (000)	Percent of Total
C	331	36.0	580	54.0
L	567	61.0	468	43.0
M	25	2.5	33	2.9
I	5	.5	1	.1
Totals	928[b]	100.0	1,082[b]	100.0

[a] Selected on basis of risk and impact potential.

[b] These are not mutually exclusive areas. There is some overlap which can be seen by comparing the Cultural Resources Element map and the Native American Element map.

Under the Protection Alternative, 97 percent of cultural resources and Native American values subject to risk fall within the C and L classes, in which such values, along with sensitive natural values, are given a priority for preservation and protection in management decisions. Values in these classes will be subsequently provided more specific protection through the development of cultural resource management plans for specific archaeological-historical resource areas, public interpretive use areas and archaeological-historical preservation areas (see Implementation Assumptions of this element). In the 3 percent of the Cultural Resource and Native American values falling in classes M and I, efforts will rely more heavily on mitigation. Furthermore, as indicated in Table AC-1 on page 168, 31 Areas of Critical Environmental Concern (ACECs) that include protection of critical cultural and Native American values common to all action alternatives will be established.

● BALANCED ALTERNATIVE ●

Relationship to Issues

The Cultural Resource/Native American Element of this alternative has been formulated to secure the maximum degree of protection and preservation of resources and values allowable and consistent with the multiple use class structure. Management recommendations are intended to address the broad range of preservation, conservation, and research concerns of cultural resource specialists and the Native American community.

Objective

To preserve and protect prehistoric, historic, and Native American values and resources within a balanced program of resource use, development, and protection, while providing opportunities for cultural resource research and Native American traditional use.

> "Ghost towns, pioneer sites, and important prehistoric sites should be protected, but with common sense."

Element Components

Table CN-3 summarizes the total acreage and percentage of sensitive cultural resource and Native American value areas on public lands managed by BLM which occur in each of the multiple use classes under the Balanced Alternative.

Under the Balanced Alternative, 56 percent of cultural resource and 79 percent of Native American values subject to risk fall within the C and L classes, in which such values, along with sensitive natural values, are given a priority for preservation and protection in management decisions. Values in these classes will subsequently be provided more specific protection with the development of cultural resource management plans for specific archaeological-historical resource areas, public interprtative use areas, and archaeological-historical preservation areas, as discussed under the Implementation Assumptions of this element, page 52.

In the 44 percent of cultural resource and 21 percent of Native American value risk subject areas falling within classes M and I, efforts will depend more upon mitigation. Additionally, as indicated on Table AC-1 on page 168, 31 Areas of Critical Environmental Concern common to all action alternatives will be established with prescriptions that include the protection of cultural and Native American values.

Table C/N-3

BALANCED ALTERNATIVE – DISTRIBUTION OF CULTURAL RESOURCES AND NATIVE AMERICAN VALUES BY MULTIPLE USE CLASS

	Known and Predicted Cultural Resources[a]		Known Native American Values[a]	
Class	Acreage (000)	Percent of Total	Acreage (000)	Percent of Total
C	213	22	375	36
L	323	34	458	43
M	359	38	192	18
I	52	6	29	3
Totals	947[b]	100	1,054[b]	100

[a] Selected on basis of risk and impact potential.

[b] There are not mutually exclusive areas. There is some overlap which can be seen by comparing the Cultural Resources Element map and the Native American Element map.

● USE ALTERNATIVE ●

Relationship to Issues

The management of cultural resources and associated values shall be directed toward the protection of resources to the fullest extent allowed by the multiple use class guidelines in designated ACECs and element areas. The mitigation of resources will take place in those areas delineated for consumptive use through avoidance, full scale recovery, or other means.

The production and development orientation of this alternative will preclude the management of many areas as cultural resource zones or the protection of many resources of Native American value. Resource management guidelines under this alternative are intended to maximize the recovery of data and lessen the intensity of impacts affecting historic and prehistoric sites and complexes. Activities of potential impact will be directed where possible and feasible to areas where the loss of cultural materials or damage to areas of Native American values will be minimized. In all cases, 36 CFR 800 procedures will be followed in conjunction with other applicable laws and policy.

> "Only the best areas should be protected, not every trash pile of historic and prehistoric uses."

Objective

To protect prehistoric historic and Native American values and resources to the extent required by law and policy, while minimizing restrictions to allowable productive and consumptive used of the public lands and resources in the California desert. Further, a research program which is integrated with management and mitigation needs shall be developed.

Element Components

Table CN-4 displays the distribution of multiple use class coverage for sensitive cultural resources and Native American values under the Use Alternative.

Table C/N-4

USE ALTERNATIVE – DISTRIBUTION OF CULTURAL RESOURCES AND NATIVE AMERICAN VALUES BY MULTIPLE USE CLASS

Class	Known and Predicted Cultural Resources[a]		Known Native American Values[a]	
	Acreage (000)	Percent of Total	Acreage (000)	Percent of Total
C	67	7	93	8
L	166	17	349	31
M	585	61	633	57
I	148	15	42	4
Totals	966	100	1,117	100

[a] Selected on basis of risk and impact potential.

[b] There are not mutually exclusive areas. There is some overlap which can be seen by comparing the Cultural Resources Element

In the Use Alternative, 24 percent of cultural resource and 39 percent of Native American values subject to risk occur in classes C and L, in which these values and sensitive natural values are given a priority for preservation and protection in management decisions. Furthermore, specific protection will be provided following plan implementation through the development of cultural resource management plans for specific archaeological-historical resource areas, public interpretative use areas and archaeological-historical preservation areas, as outlined in the Implementation Assumptions of this element.

In the 76 percent of cultural resource and 61 percent of Native American value risk subject areas falling within classes M and I, efforts will focus more on mitigation of damage. As in all action alternatives, 31 Areas of Critical Environmental Concern, as indicated on Table AC-1 on page 168, will be established with management designed to protect specific critical cultural and/or Native American values.

● COMPARATIVE ANALYSIS ● OF THE ALTERNATIVES

The following table provides a summary of the quantity of high risk-prone cultural resource and Native American values under each multiple use class designation for each plan alternative, except No Action.

The areal extent of Native American values and cultural resources within each class (see acreage figures in tables CN-2-4) is expressed in this table as a percentage of total BLM-administered lands in the CDCA.

Table C/N-5

PERCENT OF BLM-ADMINISTERED CDCA LANDS CONTAINING RISK-PRONE CULTURAL AND NATIVE AMERICAN VALUES BY MULTIPLE USE CLASS

Multiple Use Class	Cultural Resources			Native American Values		
	Protection Alternative (Percent)	Balanced Alternative (Percent)	Use Alternative (Percent)	Protection Alternative (Percent)	Balanced Alternative (Percent)	Use Alternative (Percent)
C	.1	1.7	2.8	.8	3.1	4.8
L	1.4	2.7	4.7	2.8	3.8	3.9
M	4.9	3.0	.3	5.2	1.6	.3
I	1.3	.2	.1	.4	.2	.1
Total [a]	7.7	7.6	7.9	9.2	8.7	9.1

[a] There are 12,131,000 acres of BLM-administered lands within the CDCA.

Table CN-6 below summarizes both the percentage of risk-prone cultural and Native American resources and values which fall within preservation oriented classes and the percentage which fall within mitigation oriented protection classes.

Table C/N-6

COMPARISON OF CULTURAL AND NATIVE AMERICAN VALUES PROTECTION BY PLAN ALTERNATIVE

	Cultural Resources			Native American Values		
	Protection Alternative (Percent)	Blanaced Alternative (Percent)	Use Alternative (Percent)	Protection Alternative (Percent)	Balanced Alternative (Percent)	Use Alternative (Percent)
Classes C and L – (High to Moderate Protection, Primarily Preservation Protection)	97	56	24	97	79	39
Classes M and I – (Limited Protection, Heavier Reliance on Mitigation)	3	44	76	3	21	61
Totals	100	100	100	100	100	100

Again, the No Action Alternative is not tabularized as it contains no binding multiple use class designations with attendant guidelines for future management decision. No special management areas would be subsequently developed under Cultural Resource Management Plans. All decisions on whether to preserve, protect, mitigate, or employ salvage measures for cultural resources or Native American values would be made on a case-by-case basis under 36 CFR 800 guidelines. Based on the simulated multiple class distribution for the No Action Alternative, the degree of protection provided would be closest to that given by the Use Alternative.

As the preceding tables indicate, the degree of protection of cultural resources and Native American values would range over a wide spectrum between the 97 percent level in the Protection Alternative to the 24 to 39 percent level in the Use Alternative. The Balanced Alternative would lean towards protection and preservation orientation, with 56 to 79 percent coverage of sensitive cultural and Native American resource values, respectively, falling in classes C and L. The portion of sensitive areas falling under classes M and I, where mitigation of impacts from other uses is the more dominant, management efforts would still have first efforts aimed at preservation where feasible.

Under all the action alternatives, especially critical and vulnerable values, would receive special protection from the establishment of 29 archaeological and 8 Native American value Areas of Critical Environmental Concern.

In most cases, these respective values are in the same ACEC. In some cases these ACECs are designed to protect other resource values concurrently.

CALIFORNIA DESERT CONSERVATION AREA

Cultural Resources Element

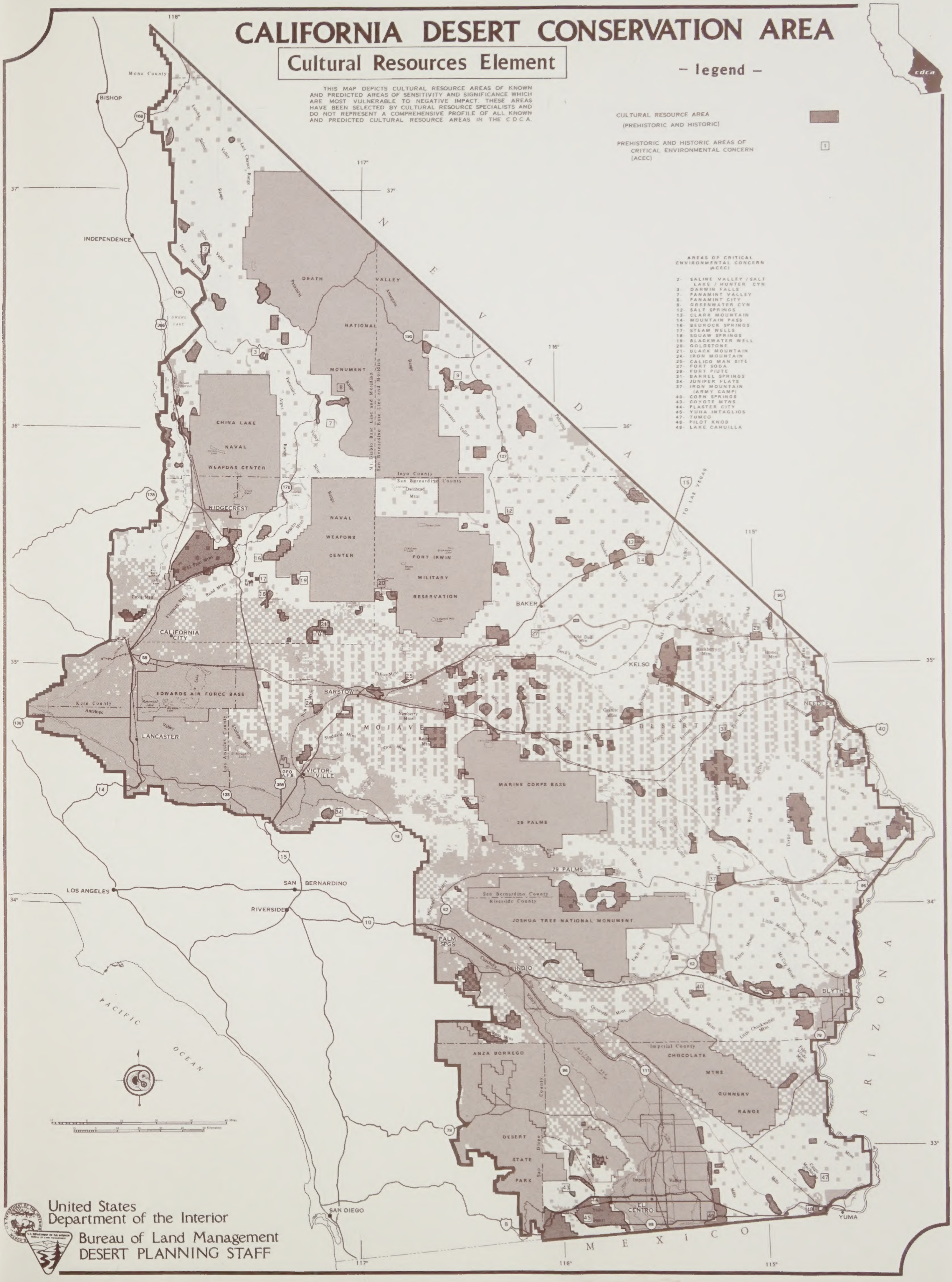
THIS MAP DEPICTS CULTURAL RESOURCE AREAS OF KNOWN AND PREDICTED AREAS OF SENSITIVITY AND SIGNIFICANCE WHICH ARE MOST VULNERABLE TO NEGATIVE IMPACT. THESE AREAS HAVE BEEN SELECTED BY CULTURAL RESOURCE SPECIALISTS AND DO NOT REPRESENT A COMPREHENSIVE PROFILE OF ALL KNOWN AND PREDICTED CULTURAL RESOURCE AREAS IN THE C.D.C.A.

— legend —

CULTURAL RESOURCE AREA (PREHISTORIC AND HISTORIC)	▨
PREHISTORIC AND HISTORIC AREAS OF CRITICAL ENVIRONMENTAL CONCERN (ACEC)	1

AREAS OF CRITICAL ENVIRONMENTAL CONCERN (ACEC)

2-	SALINE VALLEY / SALT LAKE / HUNTER CYN
3-	DARWIN FALLS
7-	PANAMINT VALLEY
8-	PANAMINT CITY
9-	GREENWATER CYN
12-	SALT SPRINGS
13-	CLARK MOUNTAIN
14-	MOUNTAIN PASS
16-	BEDROCK SPRINGS
17-	STEAM WELLS
18-	SQUAW SPRINGS
19-	BLACKWATER WELL
20-	GOLDSTONE
21-	BLACK MOUNTAIN
24-	IRON MOUNTAIN
25-	CALICO MAN SITE
27-	FORT SODA
29-	FORT PIUTE
31-	BARREL SPRINGS
34-	JUNIPER FLATS
37-	IRON MOUNTAIN (ARMY CAMP)
40-	CORN SPRINGS
43-	COYOTE MTNS
44-	PLASTER CITY
45-	YUHA INTAGLIOS
47-	TUMCO
48-	PILOT KNOB
49-	LAKE CAHUILLA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EL CENTRO
YUMA
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PACIFIC OCEAN
Mt. Diablo Base Line and Meridian
San Bernardino Base Line and Meridian
Miles
Kilometers

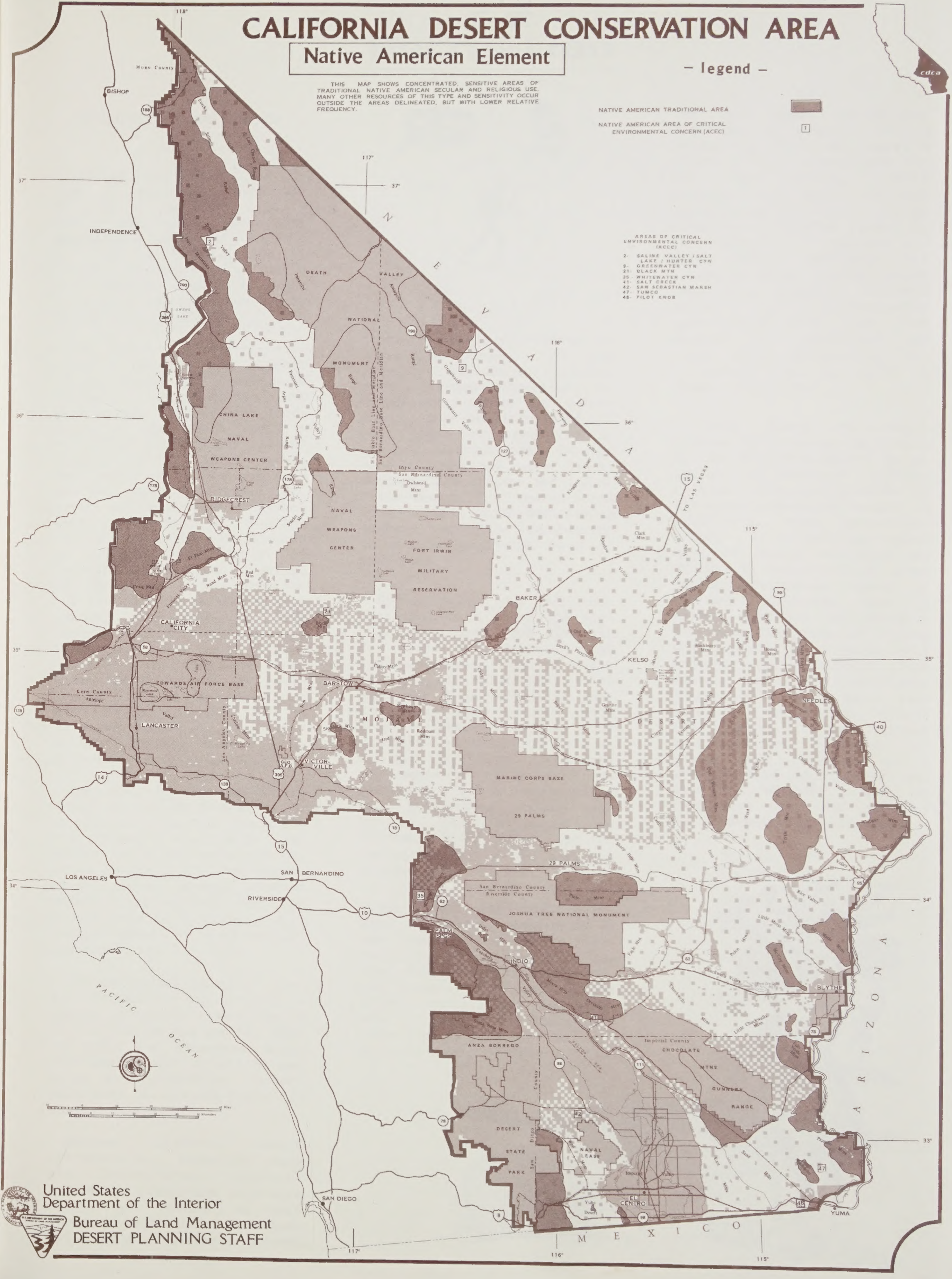
United States
Department of the Interior

Bureau of Land Management
DESERT PLANNING STAFF

CALIFORNIA DESERT CONSERVATION AREA

Native American Element

THIS MAP SHOWS CONCENTRATED, SENSITIVE AREAS OF TRADITIONAL NATIVE AMERICAN SECULAR AND RELIGIOUS USE. MANY OTHER RESOURCES OF THIS TYPE AND SENSITIVITY OCCUR OUTSIDE THE AREAS DELINEATED, BUT WITH LOWER RELATIVE FREQUENCY.



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NATIVE AMERICAN TRADITIONAL AREA ▨

NATIVE AMERICAN AREA OF CRITICAL ENVIRONMENTAL CONCERN (ACEC) ☐1

AREAS OF CRITICAL ENVIRONMENTAL CONCERN (ACEC)

2- SALINE VALLEY / SALT LAKE / HUNTER CYN
9- GREENWATER CYN
21- BLACK MTN
35- WHITEWATER CYN
41- SALT CREEK
42- SAN SEBASTIAN MARSH
47- TUMCO
48- PILOT KNOB

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RIDGECREST
Inyo County
San Bernardino County
NAVAL WEAPONS CENTER
FORT IRWIN MILITARY RESERVATION
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EDWARDS AIR FORCE BASE
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GEO. A.F.B.
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Riverside County
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PALM SPGS
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RIVERSIDE
PACIFIC OCEAN
ANZA BORREGO DESERT STATE PARK
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EL CENTRO
SAN DIEGO
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United States
Department of the Interior

Bureau of Land Management
DESERT PLANNING STAFF

CALIFORNIA DESERT CONSERVATION AREA

Native American Element

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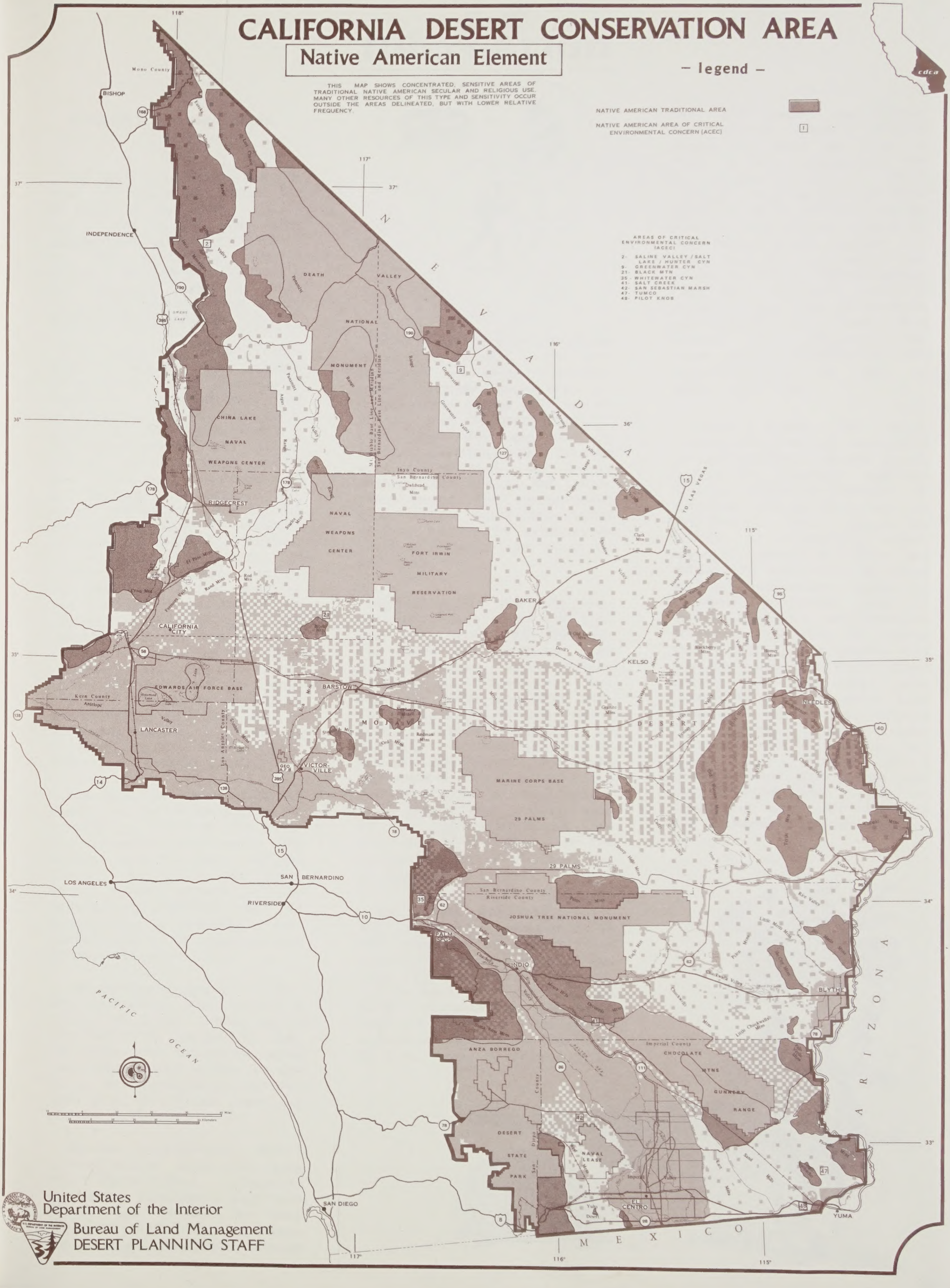
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RIDGECREST
NAVAL WEAPONS CENTER
FORT IRWIN MILITARY RESERVATION
DEATH VALLEY NATIONAL MONUMENT
Inyo County
San Bernardino County
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LOS ANGELES
SAN BERNARDINO
RIVERSIDE
SAN DIEGO
PACIFIC OCEAN
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Miles
Kilometers

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NATIVE AMERICAN TRADITIONAL AREA	▨
NATIVE AMERICAN AREA OF CRITICAL ENVIRONMENTAL CONCERN (ACEC)	1

AREAS OF CRITICAL ENVIRONMENTAL CONCERN (ACEC)

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C-2
Recreation

BACKGROUND and ISSUES

The California desert has become a recreation mecca for millions of Americans. It is one of the largest essentially uninhabited areas of wildland in the continental United States. Nowhere else is such a vast wildland region so close to a huge, restless, and highly mobile urban population.

The California desert supplies a resource base capable of providing a full spectrum of recreation opportunities and experiences. The diverse landscapes of the desert create a variety of physical and psychological settings which enable the sightseer, photographer, and backpacker to escape, discover, and explore in a natural setting, as well as enabling the off-road vehicle enthusiast to experience the thrill of competitive off-road racing. The desert is a last frontier for the many recreationists in southern California who seek respite from the monotony and frustration urban society often imposes. For the most part, these recreationists are seeking a recreation experience with little structure and no large concentrations of people, so that they can express themselves as freely as possible.

The goal of the California desert recreation program is to provide opportunities for quality recreation experiences consistent with the needs and desires of the public and recreation users, insure visitor safety, and protect the resource base to maintain a sustained yield of recreational opportunities.

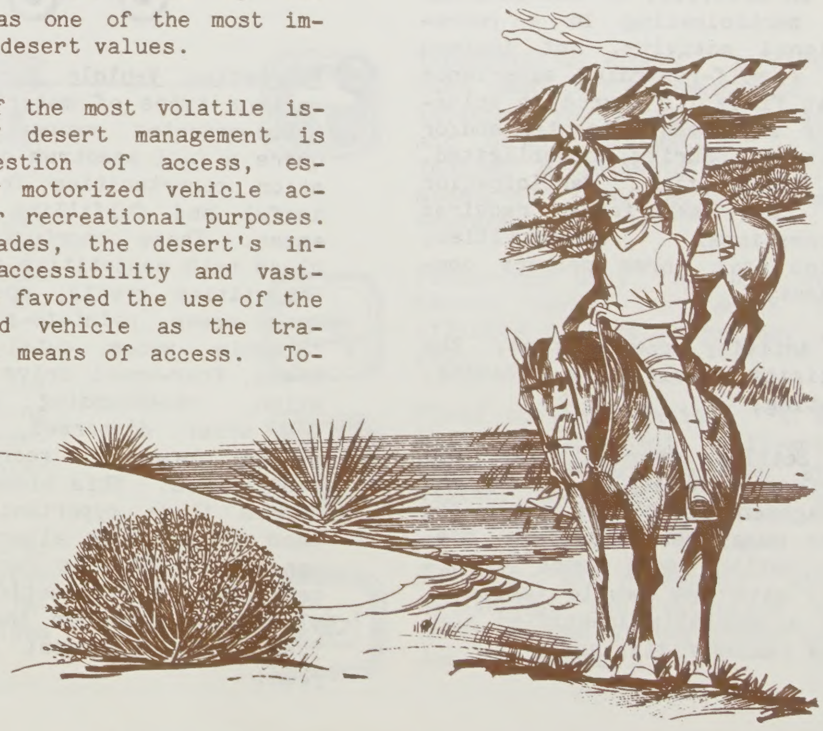
The phenomenal growth of desert recreation has created a number of broad issues and a realization by the public, BLM, and other land management agencies that a need exists to develop a comprehensive, desertwide plan to address these issues.

Because California desert recreationists generally seek the unstructured, dispersed recreation experience mentioned above, and because so many kinds of recreational opportunities exist, conflicts between recreationists are becoming increasingly evident. The most prevalent of these conflicts occur between motorized and nonmotorized forms of recreation. User conflicts have, in some instances, resulted in bitter polarizations between some recreational user types. Meeting this diverse and insistent demand for recreational opportunities while maintaining quality recreation experiences is a major challenge faced by this plan.

Recreationists not only compete with each other for similar land bases, but also vie for space with resource uses such as mining, energy transmission, and wilderness. Demand for these competing uses is intensifying in the California desert because of changing national priorities and new legislation. Such uses may compete directly with recreational uses or may impinge upon recreational values such as the desert's visual resources, often cited by the public as one of the most important desert values.

One of the most volatile issues of desert management is the question of access, especially motorized vehicle access for recreational purposes. For decades, the desert's inherent accessibility and vastness has favored the use of the motorized vehicle as the traditional means of access. Today, most desert recreational opportunities require vehicle access on roads and ways to reach a site appropriate for the chosen activity. Until recently, this access has been unrestricted in nature. Due to resource degradation caused by this unrestricted vehicle access, public sentiment has arisen to direct vehicle access away from sensitive resource areas. Some vehicle-oriented user groups fear that this concern for protection may cause their recreational opportunities to be lost or highly restricted.

Public demand for recreational services and facilities in the California desert is expected to increase substantially, primarily because of continued population growth in California. Other factors include: 1) an emerging awareness of desert resources and values, 2) saturation of other outdoor recreation areas in southern California, and 3) energy shortages and economic stresses. Because of rising travel costs, more people will come to the relatively close desert and they will stay longer, a situation which also occurred during the 1974-75 fuel shortage. Users without self-contained recreation vehicles will increase at a greater rate than those who have such vehicles. Thus, an increasing need for services and accommodations will exist.



APPROACH

The Recreation Element is analyzed in each of the four alternatives. Within the element, six major components are identified which represent the different facets of the recreation program in the California desert. These components are: 1) Recreation Opportunities, 2) Recreational Vehicle Use, 3) Visual Resources, 4) Environmental Awareness, 5) Significant Areas, and 6) Visitor Management Services and Facilities. These are described briefly below:

❶ Recreation Opportunities. The basic concept for analysis in this approach is the provision of recreation opportunities and experiences consistent with the four multiple use management classes. This component serves to set the theme for the discussion and analysis of the other components in the element.

The Recreation Opportunity concept, as adopted for use in this plan, is a recreation resources inventory and planning tool designed to classify the recreation resource base. Social and behavioral factors are considered in designing a program which provides high quality recreation experiences while promoting visitor safety and protection of natural resources. This approach is based on two major concepts:

Recreation is defined not as an activity, or the behavior of participating in a recreational activity, but instead as a self-rewarding experience that finds its source in voluntary engagements (mental and/or physical) during non-obligated, or "free," time. Participation in this experience requires recreational opportunities, which have three primary components:

a. Activity opportunities: the activity itself; e.g., hiking, hunting;

b. Setting opportunities: the preferred physical, social, and management settings; e.g., the dune buggy enthusiast may prefer rolling sand dunes (physical) with few people (social), and a specially identified play area (managerial); and

c. Experience opportunities: the psychological and physiological outcomes desired by the user; e.g., taking risks, applying skills, getting exercise, seeking solitude, etc.

Satisfactory recreation experiences occur over a spectrum of settings ranging from concentrated use settings, which are generally undeveloped but often disturbed by use (Multiple Use Class I) to extensive Wilderness Areas (Multiple Use Class C). These areas are shown on the Recreation Element Map for each alternative. Two intermediate classes have also been identified: Class L, with predominately natural to primitive settings and Class M, with natural to moderately disturbed settings. Together the four multiple use classes encompass the major settings found within the California Desert Conservation Area. Specific management actions to maintain, enhance, or change the classes, (and, thus, the settings and the experiences they offer), are developed and presented in each of four CDCA alternative plans.

❷ Recreation Vehicle Use. The various types of motorized vehicle-oriented recreation require a full spectrum of recreation opportunities for meaningful and fulfilling experiences. These opportunities include both competitive and noncompetitive events, open challenge areas, point-to-point motorcycle races outside open areas, four-wheel drive exploration, rockhounding pursuits and other dispersed, unregimented forms of recreational vehicle use. This element discusses those opportunities in each of the four alternatives, consistent with the various alternatives for directing vehicle use proposed in the Motorized Vehicle Element of this plan.

❸ Visual Resources. The CDCA has a variety of scenic values or visual resources which provide important recreation opportunities and general aesthetic value. BLM's Visual Resource Management System was developed to evaluate these resources. Three components of visual resource values have been assessed: 1) scenic quality, 2) visual sensitivity to landscape alteration, and 3) visibility of landscapes from viewing routes or areas. Areas of the CDCA have been rated as having high, moderate, or low visual resource value ratings. These are shown on the Visual Resource Values Map of this element.

❹ Environmental Awareness. Interpretation, in the resources management profession, has been defined as the art of creating an understanding and awareness of the environment in the mind of the visitor. Such an awareness can substantially increase a visitor's enjoyment of an area. Interpretation can also help preserve natural or cultural resources; people tend to value what they understand, and to protect that which they value. Through an active interpretive program, desert users will, over time, become more aware of their responsibility for their actions with respect to other users, and towards maintaining a high-quality recreation environment for all.

An effective interpretive program will substantially increase BLM's field presence, and will firmly establish the BLM as a responsible land steward with a clear commitment to multiple use management on a sustained yield basis. Closely allied with interpretation is a more formal program of environmental education that is designed to meet the needs of educational institutions, and a policy of encouraging both basic and applied research by qualified investigators on a wide variety of topics.

⑤ Significant Areas. Sixteen ACECs are in some degree recreation oriented, demonstrating outstanding visual resources or examples of natural themes or processes. Where appropriate, such areas will be provided with special interpretive services and/or facilities. These are discussed in the ACEC section of this plan.

Studies of BLM-administered lands proposed for possible inclusion in the National Park System are treated as a subalternative under the Protection Alternative. The areas considered in this plan include the East Mojave Area, Saline/Eureka Valley Area, Trona Pinnacles, and Mecca Hills/Orocopia Mountains Area.

Visitor Management and Services Facilities. This component is primarily a tool by which many the objectives of other components of this element are achieved. The types of facilities recommended in each alternative are described on Table R-8, which may be interpreted with the aid of the brief definitions of each facility type presented below.

Way station: a permanent visitor center with visitor services personnel and interpretive displays, brochures, etc.

Campground: a designated camping area for tent or vehicular camping. May have toilets, water, or other sanitary facilities.

Trailhead: marks the starting point of a trail. Self-guiding trail brochures or other interpretive information are available.

Parking loop: a paved area designated for vehicular camping; usually no other facilities would be provided here.

Interpretive kiosk: a structure used for dissemination of interpretive brochures, maps, and other information. May include a bulletin board for messages. No personnel are assigned.

Picnic/day use: an area with picnic tables and waste facilities designated for day use only.

Field contact station: a mobile or permanent small-scale visitor center staffed with visitor services personnel and interpretive materials.

Education and research: sites designated for education and research use by permitted persons or groups.

IMPLEMENTATION ASSUMPTIONS

Recreation Vehicle Use. "Open," "closed," "designated roads and ways," and "existing roads and ways" designations for motorized vehicle use will become effective upon the adoption of this plan. For other implementation assumptions, see the Motorized Vehicle Element.

Visual Resources. Upon adoption of the Desert Plan, the visual resource management (VRM) guidelines for the selected alternative will become immediately effective. These guidelines are implemented through the activity planning process, environmental analyses, and project design formulation.

Environmental Awareness. Authority for a volunteer assistance program and the proposed Cooperative Natural History Association, a private foundation which would assist in various aspects of an environmental awareness program, will be provided by Congress.

Significant Areas. The Pacific Crest Trail was established as one of the initial components of the National Trail System Act of 1968. Approximately 70 miles of the Pacific Crest Trail has been or will be constructed within the CDCA. Construction of this trail was mandated prior to this planning effort and will continue irrespective of this plan. Auxiliary facilities such as trailheads and spur trails associated with the PCT will be addressed in recreation activity plans as outlined in this element.

The Mojave Trail is identified on the recreation element map for all alternatives because of its prehistoric and historic significance and its outstanding potential for recreational use and interpretation. A special activity plan will be developed and implemented in phases.

Significant areas currently designated as Natural Areas, National Natural Landmarks, etc., will continue to be managed in the same manner as they were prior to the adoption of the plan, regardless of the alternative chosen.

Visitor Management & Services Facilities. Visitor management and services facilities will be incrementally added over the next 20 years, consistent with the recreation opportunities framework for this element of the plan. Those facilities identified presently in the plan represent the initial phase -- developments which will generally be completed within five years after adoption of the plan. Wilderness related facilities, e.g., trailheads, will be completed within five years after wilderness designation. Subsequent recreation improvements will be added to the plan as future needs arise. The determination of location and type of facility will be as follows:

⊙ Visitor facilities, particularly campgrounds, will be located where needed to best accommodate visitor use. However, areas of unusual, fragile, or sensitive resources (e.g., significant riparian habitat) will not be developed, although facilities may be developed nearby to allow for reasonable access and use.

⊙ Campground facilities will generally be minimal and oriented to the needs of destination-oriented campers -- those intending to remain at or radiate from the site.

⊙ The exact location, type, and extent of facility development will be based on management needs identified in recreation activity plans prepared subsequent to plan adoption. (Note that directional signs and general purpose trails are not considered as visitor facilities in this plan.)

⊙ Facility development, operation, and maintenance are important considerations in the design and distribution of facilities. Concessionaire and/or contract arrangements for the operation and maintenance of visitor management facilities will be instituted prior to the development of new facilities. Existing facility management will be reevaluated according to the objectives of the final plan.

⊙ It is BLM policy that the needs of the handicapped will be considered in development of visitor facilities. This consideration will not be limited to architectural requirements, but will include interpretive facilities and services for all of the senses.

MONITORING

Monitoring is a systematic feedback of information to planners and managers in order to determine the extent to which the demand for planned recreation products and services is being met. Monitoring for visitor safety, resource protection, and provision of high quality recreation experiences are equally important.

Periodic surveys of recreation users will be completed to determine changes in attitudes, preferences, needs, and desires among all user types and the public as a whole.

Visitor use flights will continue in the California Desert Conservation Area to determine the amount of use and fluctuations of use. Approximately 7 to 10 flights will be conducted annually.

Additionally, traffic counters will be placed on the ground in high intensity use areas (e.g., campgrounds, open areas) for purposes of augmenting aerial flight data and aiding in the determination of recreation use patterns.

There will be a continuous effort made to evaluate the progress of the Environmental Awareness Program, monitoring such factors as:

a. The rate and type of requests from the public for services.

b. The rate of informed public involvement in the decision-making process.

c. The extent of voluntary and prompted coverage of the program by the media.

d. Regular assessment of the rate of cumulative environmental impacts related to recreation activities.

e. The extent the public voluntarily conforms to the various rules and regulations that apply to desert recreation.

RECREATION

Plan Alternatives

Relationship to Issues

The recreation opportunities to be provided in the No Action alternative are predominantly natural to primitive and moderately concentrated use experiences. Opportunities for most activities characteristic of multiple use classes L and M are provided. Needs for wilderness experiences will not be met by this alternative because no wilderness areas will be designated.

Conflicts between recreation users are greatest in this alternative because there is no comprehensive program or plan for meeting public demand and accommodating various incompatible forms of recreation in a rational manner. Conflicts between motorized and nonmotorized forms of recreation will continue. Conflicts between recreation and other uses and activities will also continue and intensify, particularly with miners, ranchers, and residents of the desert.

The limited ranger force and BLM presence in the field will lack the numbers needed to effectively deal with recreation conflicts and issues.

All decisions will be on a case-by-case basis, not from a desertwide perspective. This will have particularly adverse effects on visual resources, which are heavily impacted by major utility corridors containing overhead transmission lines, and other rights-of-way.

There will be no coordinated Environmental Awareness Program that would systematically work to reduce conflicts between recreation users.

Objective

To provide recreational opportunities at present levels and distribution, stressing limited and moderate use.

Element Components

The No Action Alternative would continue the same recreation vehicle use policies first instituted on November 1, 1973, with the development of the Interim Critical Management Plan (ICMP) for Recreation Vehicle Use on the California Desert and as amended. The primary emphasis of the No Action Alternative is to provide a full spectrum of recreational vehicle use opportunities and experiences while protecting resource values.

Fourteen areas are currently open for recreation vehicle use opportunities. These open areas are large enough to provide rewarding open vehicle play experiences. However, due to funding and manpower constraints, not all of these open areas have been environmentally assessed as required, causing organized competitive events to be confined to the few open areas that have had assessment (for map details and comparative statistics see the Motorized Vehicle Element).

The Environmental Awareness Program will continue to be uncoordinated and piecemeal. There will be no major program themes, no general or site specific topics, no ACECs to interpret, and no public volunteer program or cooperative natural history association to disseminate information. Way stations will be limited to the existing Barstow Visitor Center and possibly the construction of one additional way station at Ocotillo in Imperial County. Overall, few services are provided to potential recreationists and there are no clear objectives for visitor management services and facilities. The tables at the end of the element and the No Action Recreation Element Map provide additional information.

Relationship to Issues

The recreation opportunities to be provided in the Protection Alternative are predominantly wilderness and primitive experiences, characteristic of multiple use classes C and L. Recreation opportunities for these types of experiences, which require varying levels of natural, primitive settings, are maximized, while opportunities for the more intensive use experiences are greatly reduced.

Under this alternative, conflicts between recreational and other resources are minimized because use is greatly controlled, low to very low user densities prevail, except in the small number and size of open areas, and some intensive recreation opportunities and uses are restricted.

Access to enhance primitive and wilderness opportunities will be maximized commensurate with the objectives of this alternative. Access for other recreation opportunities will be reduced and allowed primarily on designated roads and trails.

Competitive motorized vehicle events and general ORV play will be restricted to fewer and smaller open areas and cross-country events will be confined to a relatively small land base. Projected demand for these intensive forms of recreation will not be fully met in this alternative.

Visual resources will be given maximum protection in this alternative. Limits placed on development under the protective classes C and L will reduce the number and nature of structural intrusions. Further, this alternative reduces the number of new desert utility corridors by encouraging the upgrading of present facilities and the location of new lines within existing rights-of-way.

The Environmental Awareness Program will stress natural values within settings which show little human influence. The growing demand for education and research will be accommodated and encouraged. Maximum opportunity to use the desert as a classroom and laboratory will be afforded students of all ages under this alternative.

Visitor management services and facilities will be an effective tool in minimizing conflicts between users by channelling various forms of recreation activity into appropriate areas and carefully monitoring the results. Additional field contact facilities will also serve to increase the effectiveness of the limited numbers of field personnel through increased visitor awareness and opportunities for contact.

> "The variety of landforms, scenery, flora and fauna found in the desert is unbelievable. I enter it with respect and leave it with peace of mind."

Objective

To provide recreation opportunities while stressing low to moderate levels of use consistent with the protection of sensitive resources.

Element Components

The Protection Alternative provides 108 wilderness areas encompassing about 5.2 million acres for recreational use (see Wilderness Element and maps for details). Six areas are proposed as open for off-road motorized vehicle use, comprising 93,000 acres, or about 0.8 percent of BLM-administered CDCA lands. No point-to-point competitive events (i.e., those run as a cross-country course between two points) will be allowed (see Motorized Vehicle Element for details).

An additional 17 Scenic Routes, totaling 200 miles in length, and 2 National Trails, totaling about 320 miles in length, are proposed for this alternative. Sixteen ACECs which include significant features having recreational value are proposed in this alternative, as well as in the other two action alternatives.

Visual resource values are shown on the Visual Resource Values Map of this element. By comparing this to the Protection Alternative map in the front pocket of this document, it can be seen that visual resource value areas are afforded the greatest level of protection under this alternative. Ninety-eight percent of high visual resource value areas fall into the protection-oriented classes C and L (see also Table R-1 at the end of this element).

The multiple use class allocation is predominately in C and L, providing the most opportunities for the more primitive, dispersed forms of recreation. Facilities in these classes will be smaller and less developed than in other alternatives and are primarily for the protection and public understanding of resource values and safety of the user. These facilities will be located primarily in Class L areas, but will also serve Class C areas. The most prevalent types of facility will be campgrounds, trailheads, and interpretive kiosks. While trailheads are not intended for long-term use, they may be provided with minimal campground type improvements such as parking areas, vault toilets, and developed water.

This alternative will include more intensively developed sites in the M and I classes to provide opportunities for the higher concentrations of use in the limited amount of area allocated to these classes. These facilities will be designed for use in moderate to high densities. New facility development to achieve such moderate to highly concentrated use may vary from undeveloped designated camping areas (i.e., parking loops for self-contained recreational vehicles) to fully developed campgrounds for the "traditional" camper, with designated sites, tables, parking, ramadas, restrooms, and water. Numerous day use facilities such as picnic areas will be provided. User comfort and convenience will be a consideration.

The highly restrictive nature of this alternative will require a high degree of field presence for proper implementation. This field presence can be achieved through visitor contact stations, brochures, the media, sign posting, and visitor services program personnel.

Visitor or field contact stations will be used to facilitate public contact and to disseminate information regarding visitor use and the protection of sensitive resources.

Use dispersed throughout the vast areas in C and L classes will require numerous visitor services program personnel to provide for anticipated visitor assistance needs, to monitor compliance, and to assure resource protection. Visitor services and assistance needs can be more efficiently dealt with in the concentrated use areas of the M and I classes. While potential for conflict between uses can be expected to increase in these more intensively used areas, these conflicts can be dealt with by fewer personnel due to the physical concentration of users.

Research and education use is encouraged in the Protection Alternative. In addition to the protection provided by the wilderness and primitive emphasis of this alternative, a number of new education and research facilities are proposed to be developed within the University of California Natural Land and Water Reserve System -- Panamint Springs, Granite Mountains, Chuckwalla Bench and Algodones (Imperial) Dunes. (Note that these sites are proposed for research and education purposes in all three action alternatives.)

The Environmental Awareness Program will complement the recreation plan and stress the following:

❶ Comprehensive protection of resource values.

❷ Emphasis on protection and general topic themes.

❸ Development and designation of number and distribution of education and research facilities and areas.

❹ Augmented BLM field presence through the services of volunteer groups and individuals, and the proposed Cooperative Natural History Association.

For additional details on this alternative, see the Protection Recreation Element Map and the tables at the end of this element.

NATIONAL PARK PROPOSALS

(Protection Subalternative)

Public interest has indicated a need to conduct studies relative to the best management for areas with National Park potential within the CDCA. Four areas subsequently studied were: the East Mojave Area, the Saline/Eureka Valley Area, the Trona Pinnacles, and the Mecca Hills/Orocopia Mountain Area. Currently, legislation is pending before the 95th U.S. Congress regarding possible National Park status for the East Mojave Area. By an agreement between the BLM and the National Park Service (NPS), the BLM conducted preliminary studies using NPS criteria to determine the eligibility of these areas for National Park status. These preliminary studies resulted in the following findings.

❶ East Mojave Study Area: received a preliminary determination of eligibility.

❷ Saline/Eureka Valley Study Area: met basic NPS criteria and was determined eligible, but is not considered an outstanding candidate at this time.

❸ Trona Pinnacles Study Area: was found unsuitable as a distinct NPS unit; might qualify as an adjunct to Death Valley National Monument.

❹ Mecca Hills/Orocopia Mountains Study Area: was found unsuitable as a distinct NPS unit, but might qualify as an adjunct to Joshua Tree National Monument.

Areas considered for addition to the National Park System, must be subjected to criteria dealing with (1) significance, (2) suitability/feasibility, and (3) management alternatives. For areas meeting the criteria, the Service annually prepares a list in priority sequence of those areas which it considers to have potential for addition to the National Park System. In preparing this list, the Service considers all applicable variables, including discernible threats to the resource which can be avoided only through public acquisition or control, as well as rapidly rising land costs which may indicate the desirability of early acquisition.

The four candidate areas were subjected to an evaluation to determine their significance in terms of meeting the National Park Service criteria. An area proposed primarily for its natural and/or cultural resources must possess outstanding national significance as evaluated by the National Park System Advisory Board and the Secretary of the Interior. Significance must relate to the themes contained in the National Park System Plan, or, in the case of a historic property, to new themes that may be approved as history continues to unfold. To be suitable for inclusion in the System, an area should represent themes presently unrepresented or poorly represented in the System, or should transcend related units of the System in resource values or interpretive potential. On the basis of this initial evaluation, the

Bureau, with the concurrence of the National Park Service, finds that both the East Mojave Area and the Eureka/Saline Valley area meet these criteria and that additional studies would be necessary to determine whether transfer of management is feasible. Such studies would include analysis of the suitability/feasibility and management alternatives criteria not covered in the BLM study.

With establishment of a national park or monument for the East Mojave Area, a limited but intensive development of an administrative complex, visitor center, and interpretive program involving designated roads, special trails for nature observation, and camping facilities would take place. Exact details as to the extent of development and location of facilities cannot be determined until a more intensive park development and management plan is developed by the National Park Service. Overall, NPS would manage the area under a more intensive, but higher recreation use resource protective program than would BLM. (Note that the proposed park boundary is lined on the Protection Alternative Recreation Element Map.)

The BLM proposed management prescriptions for the East Mojave Area can be characterized as predominantly protection-oriented for both the Protection and Balanced alternatives. High scenic quality, rich and varied vegetation and wildlife habitat, unique geology and land forms, and highly significant cultural-archaeological and historic values combine to create this important resource complex. Historically, this area has sustained substantial use including mining, ranching, and homesteading. Current activity, particularly domestic livestock grazing, is being closely examined to determine levels of use which can be sustained without adversely affecting the outstanding natural qualities of the area. Within the context of multiple use and sustained yield, the East Mojave would be managed to conserve and protect. Heavy recreation and visitor use, in contrast to NPS management, would not be encouraged, camping and visitor facilities would not be developed, and the overall number of visitor days to the area would remain fairly constant. In both the Protection and Balanced Alternatives, recreation emphasis would be on wilderness and primitive opportunities, nature study, and education and research. In the Use Alternative a more aggressive use-orientation would prevail and more concentrated recreation activity would be encouraged.

The Eureka/Saline Valleys study area meets potential National Park standards but is not an outstanding candidate at this time for addition to the system. No legislation has been proposed to give this area park or monument status.

Relationship to Issues

The recreation opportunities to be provided in the Balanced Alternative comprise the full range of recreation opportunities, ranging from concentrated use to wilderness experiences. Opportunities for all desert recreation activities characteristic of multiple use classes C, L, M, and I are provided. Needs are met in this alternative for reasonable levels of recreation use as well as resource protection of the California desert. Recreation demands for most experiences are met through a balanced allocation of the desert into the four multiple use classes, providing for user densities which range from very low to very high. Visual resources values receive a moderately high level of protection, although permitted use and development can cause some deterioration of lower visual resource values.

Conflicts between recreation users are reduced in the Balanced Alternative because the demand for most forms of recreation have been anticipated and provided for to some extent. Areas have been designated to accommodate many distinct recreational pursuits and to disperse them over a large land base, so that the competition for the same tract of land is reduced. Conflict between recreation and other activities, such as mining and grazing, is also reduced in this alternative.

This alternative attempts to satisfy the access needs of the majority of the recreation user population by providing access to a range of settings. Access consideration is given both to those pursuing wilderness and primitive recreational opportunities and to those seeking activities in more concentrated use areas.

A diverse and balanced system of developed visitor management facilities will be provided and maintained, with emphasis on serving concentrated recreation use areas, but also meeting the needs of more dispersed recreation use with camping and service areas located along existing roads.

Thirty-nine wilderness study areas are recommended for wilderness designation, representing about one-third of the area recommended for designation in the Protection Alternative. In a similar ratio, this alternative has about three times as much open area for off-road vehicle use as the Protection Alternative.

The Balanced Alternative may not be perceived by those recreationists oriented to off-road motorized vehicle play as adequately meeting their needs for open areas and a variety of terrain for cross-country travel. This alternative is more restrictive in terms of area provided for this purpose than the current vehicular management plan (ICMP). Conversely, those advocating more protective management for the desert will view this plan as an accommodation to off-road vehicle presence at the expense of the natural environment (see Motorized Vehicle Element for further discussion of this issue).

Objective

To provide the broadest range of recreational opportunities consistent with this alternative's overall objective of meshing reasonable use and development with adequate protection of sensitive resources; and to minimize conflicts between recreational pursuits and between recreation and other uses on the desert.

Element Components

The Balanced Alternative provides 39 wilderness areas encompassing about 1.8 million acres for recreational use (see Wilderness Element and maps). Thirteen areas totalling 289,000 acres are proposed as open for off-road motorized vehicle use, and point-to-point events will be accomodated on existing roads and ways and designated cross-country routes in classes M and I (see Motorized Vehicle Element for details).

About 78 percent of high visual resource value areas obtain protection in classes C and L. The remainder of scenic desert landscape will be exposed to activities and uses in the more intensive multiple use classes M and I. There are 22 utility planning corridors proposed in this alternative.

The Environmental Awareness Program will be structured as a systematic, coordinated desert-wide program. While the emphasis will be on protection of desert resources while allowing use of these resources, there will be a combination of general and site-specific themes. Research centers and visitor centers will be located appropriately throughout the desert. Emphasis on both basic and applied research by qualified investigation will be encouraged.

The unique values in the East Mojave area will be managed with other resource uses on a multiple use basis. However, protection of sensitive resources will be given priority over conflicting uses.

As in the other action alternatives, 16 ACECs which have significant recreational value are proposed. Eighteen new Scenic Routes and 2 National Trails, totaling 300 and 320 miles in length, respectively, are proposed for addition to existing designations.

A balanced approach to field presence and visitor services will be achieved through a system of both mobile and permanent contact stations. Visitor services personnel assigned to the contact stations will disseminate information concerning the use and protection of sensitive resources. Facilities proposed for development under this alternative include 6 new campgrounds, 3 trailheads, 8 parking loops, 8 interpretive kiosks, 9 picnic/day use areas, and 4 field contact stations.

For additional details on this alternative, see the Balanced Recreation Element Map and the tables at the end of the element.

Relationship to Issues

The recreation opportunities to be provided in the Use Alternative are predominantly for concentrated use and for dispersed use in natural settings, consistent with the management opportunities for all objectives of classes I, M and L. Needs for concentrated use and more dispersed use in natural settings will both be met at a very high level. Under this alternative, 66 percent of the CDCA will be devoted to moderately concentrated use in natural settings for recreation opportunities (Multiple Use Class M). Essentially, recreation opportunities for such experiences will be maximized, while opportunities will be minimized in the Use Alternative for wilderness and primitive recreational experiences.

Conflict levels among recreation users and between recreationists and other users are low to moderate in the Use Alternative because of the increased number and variety of recreation users participating in close proximity to one another. Because of the increased land base provided for recreational vehicle use, the potential for conflicts between motorized and nonmotorized forms of recreation is intensified, and recreation vehicle users will have a greater tendency to conflict with the operations of other land uses such as ranchers, miners, or energy related projects. Public demand is satisfied for the vehicle-oriented use spectrum in this alternative, but not satisfied for the primitive/wilderness-oriented recreationist.

Seventy-six percent of BLM-administered lands fall within classes M and I, with their minimal restrictions on access. Recommendations for wilderness designation are generally limited to areas with little potential for vehicle access.

> "Family togetherness combined with the off road opportunities for exploration and solitude.... that's what my desert is to me."

Objective

To provide recreational opportunities favoring the moderate to concentrated form of recreational activity, consistent with intensive resource use and development.

Element Components

The Use Alternative provides 6 Wilderness Areas, totaling 602,000 acres (see Wilderness Element and maps for details). Twenty areas are proposed as open for motorized vehicle use. Point-to-point and all other forms of motorized competitive events are developed within open areas and between open areas on existing roads and trails (see Motorized Vehicle Element for details).

The multiple use class distribution in this alternative maximizes opportunities for the more concentrated use experiences which favor mechanized forms of recreation. Since these recreationists are generally mobile and self-contained, this type of activity will be accommodated by a number of minimal type facilities, such as parking loops, located so as to avoid sensitive resources while providing recreation opportunities for camaraderie without unwanted development or access constraints. Twelve parking loops are proposed for construction in this alternative.

The Use Alternative offers a full spectrum of recreation vehicle use opportunities and experiences and is primarily oriented towards meeting such demands as vast open areas, experiencing the physical challenges and mastery of the vehicle, emotional release, escape from urbanization, family togetherness, and companionship with fellow off-road enthusiasts.

Of the three "action" alternatives, this alternative protects visual resources the least. About 38 percent of high visual resource value areas fall into C and L. The additional utility corridors proposed in the Use Alternative potentially reduce the number of "untouched" scenic vistas. Also, the accommodation of intensive forms of use will have some effect on scenic quality where mitigation is not possible.

Eighteen additional Scenic Routes and two additional National Trails are proposed for this alternative, totaling 300 and 320 miles in length, respectively. Sixteen ACECs which include significant recreational values are recommended.

The Environmental Awareness Program will emphasize use of the desert without undue abuse. Research centers will be established and applied research by qualified investigators will be encouraged.

In addition, 18 new developed camping facilities will be provided, primarily for those without self-contained vehicles who recreate in areas of concentrated use. These will include ramadas, waste facilities, individual campsites, and other facilities.

Intensive management will be required in the limited C and L class areas, which are 22 percent of this alternative, to assure opportunities for wilderness and primitive experiences. Visitor management facilities and services needed to assure these opportunities include interpretive brochures and controlled access.

Visitor services personnel will be primarily available at camping areas and other areas of visitor concentration, and visitor service accommodations will be emphasized to a greater degree than other alternatives involved in visitor assistance. This alternative proposed twice as many campgrounds and three times as many parking loops as the Protection Alternative does. Five interpretive kiosks and two picnic/day use areas are recommended. A single visitor field contact station will be provided. As in the other action alternatives, contact stations will generally be mobile so that they can follow visitor use.

For additional details on this alternative see the Use Alternative Recreation Element Map and the tables on pages 71-4.

COMPARATIVE ANALYSIS of the ALTERNATIVES

Table R-1 briefly summarizes the aspects of the six major components of the California desert recreation program for each alternative. Additional tables provide more detailed information on recreation vehicle use and visitor management facilities. Tables R-2, R-3, R-4, R-5, R-6, and R-7 name major locations in the CDCA available under each alternative for various types recreational vehicle use, including those which exclude motorized vehicles in favor of recreation using nonmotorized vehicles (Table R-4).

Table R-8 describes the various visitor management facilities recommended for each alternative. These are also indicated on the Recreation Element maps.

TABLE R-1

Summary Comparison of Recreation Element Components by Alternative

	No Action	Preservation	Balanced	Use
RECREATIONAL OPPORTUNITIES	Predominately natural to primitive and moderately concentrated use opportunities characteristic of classes L and M. No wilderness opportunities provided. Demand for recreation met on a case-by-case basis. Extensive conflicts between recreationist and other uses, and among recreationists.	Heavy emphasis on primitive and wilderness opportunities. Satisfies demands for these types, but demands for moderately concentrated and concentrated demands, especially related to vehicle use, are not met. Strict control of recreation minimizes conflicts between recreationist and other uses. Minimum conflicts among recreationists in classes C and L; intensified conflicts in M and I because of limited areas available.	Recreation opportunities provided across spectrum, with "mid-spectrum" domination of primitive and moderately concentrated, natural settings and opportunities. Demands for most recreational opportunities are met, minimizing conflicts between recreationists and other users and also among recreationists.	Predominately natural and concentrated opportunities characteristic of classes M and I. Satisfies demands for these use types, but demands for primitive and wilderness opportunities are not met. Conflicts generally low to moderate because of wide distribution of recreational users over a large land base. Conflicts in C and L intensified.
VISUAL RESOURCES				
- Level of Protection	Similar to Balanced but overall less than appropriate for varying resource values, due to lack of plan.	There would be little or no loss of visual resources values.	Preservation management of valuable visual resources; use management of the less valuable.	Preservation management for only some of the most valuable visual resources. The rest, as well as the less valuable, would be managed to meet other resource development needs.
- Percentage of High Value Resources (6.4 million acres in CDCA) within classes C and L.	47%	98%	78%	38%
- Percentage of Medium Value Resources (4.8 million acres in CDCA) within classes C and L.	31%	95%	48%	11%
RESOURCE VALUES - SIGNIFICANT AREAS	Little or no protection. Case-by-case approach to management of significant areas.	Identify, designate, and manage areas where special management attention is required to protect important resource values relative primarily to recreation opportunities. Special study for E. Mojave National Park. 18 ACECs to be established.	E. Mojave will be managed for multiple use on a substained yield basis. 18 ACECs to be established.	No special management status for E. Mojave. 18 ACECs to be established.
- Scenic Routes (County designations included)				
Number of routes	52	69	70	70
Total length in mileage	1900	2100	2200	2200
- Proposed or Designated National Trails				
Number of Trails	1	3	3	3
Total length in mileage	36	360	360	360
MOTORIZED VEHICLE ACCESS	Access as described in the ICMP.	Limited principally to designated roads and ways.	Access needs of the majority of rec. users will be satisfied.	Maximum vehicle access provided.
VISITOR FACILITIES AND USES	Continue current level of maintenance & management on 8 developed campgrounds.	Minimal development necessary to protect resource values. Facilities located predominately in L Areas to enhance primitive and wilderness opportunities in C & L classes. Some extensively developed facilities to protect resource values in concentrated use areas.	Balance of facilities throughout CDCA, including limited number of developed sites to facilities resource utilization and minimal development to protect resources and assure primative and Wilderness experiences.	Facilities located predominately in M and I classes to accommodate the less primitive, more mechanical forms of recreation use. Intensive management required in L & C classes to assure primitive & wilderness experiences.
ENVIRONMENTAL AWARENESS PROGRAM				
- Structure	Uncoordinated, piecemeal program that depends on individual initiative rather than a systematic approach. No overall program theme or emphasis. No volunteer program or cooperative association program.	Systematic, coordinated desertwide program. Overall theme is "need for resource protection," with emphasis on general topics. Will actively use volunteer services and the aid of a cooperative association.	Systematic, coordinated desertwide program. Theme is "protection with wise use," with combination of general themes and site-specific interpretation. Will actively use volunteer services and the aid of a cooperative association.	Systematic, coordinated desertwide program. Theme is "use, but not abuse," with emphasis on site-specific interpretation. Will actively use volunteer services and the aid of a cooperative association.
- Scientific Research	Unregulated by BLM.	Emphasis on basic research by qualified investigators in compliance with class guidelines and other regulations.	Both basic and applied research by qualified investigators in compliance with class guidelines and other regulations.	Emphasis on applied research by qualified investigators.
- Number of Research Centers	2	7	7	7

Table R-2

MAJOR SAND DUNES OPEN TO MOTORIZED VEHICLE USE BY ALTERNATIVE

Name	No Action Alternative	Protection Alternative	Balanced Alternative	Use Alternative
1 Devil's Playground				X
2 Dumont Dunes	X	X	X	X
3 Imperial Dunes	X	X	X	X
4 Panamint Dunes			X	X
Total	2	2	3	4

Table R-3

DRY LAKES OPEN TO MOTORIZED VEHICLE USE BY ALTERNATIVE

Name	No Action Alternative	Protection Alternative	Balanced Alternative	Use Alternative
1 Broadwell Dry Lake			X	X
2 Cadiz Dry Lake				X
3 Coyote Dry Lake		X	X	X
4 Danby Dry Lake				X
5 El Mirage Dry Lake	X			X
6 Ford Dry Lake	X		X	X
7 Ivanpah Dry Lake				X
8 Melville Dry Lake	X	X	X	X
9 Mesquite Dry Lake			X	X
10 Panamint Valley Dry Lakes			X	X
11 Silurian Dry Lake			X	X
12 Silver Dry Lake			X	X
13 Soda Dry Lake				X
14 Soggy Dry Lake	X	X	X	X
15 Superior Dry Lake				X
Total	4	3	9	15

Table R-4

DRY LAKES OPEN TO NON-MOTORIZED VEHICLE USE ONLY (SAND SAILING, WIND SKATING) BY ALTERNATIVE

Name	No Action Alternative	Protection Alternative	Balanced Alternative	Use Alternative
1 El Mirage Dry Lake		X		
2 Ivanpah Dry Lake	X	X	X	
3 Silurian Dry Lake		X		
4 Superior Dry Lake		X	X	
Total	1	4	2	0

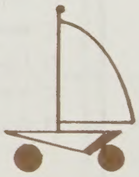


Table R-5

HILL CLIMB AREAS FOR MOTORIZED VEHICLE USE BY ALTERNATIVE

Name	No Action Alternative	Protection Alternative	Balanced Alternative	Use Alternative
1 Dove Springs	X		X	X
2 Jawbone Canyon	X		X	X
3 Johnson Valley	X	X	X	X
Total	3	1	3	3

Table R-6

MAJOR AREAS FOR COMPETITIVE EVENTS BY ALTERNATIVE

Name	No Action Alternative	Protection Alternative	Balanced Alternative	Use Alternative
1 Johnson Valley	X	X	X	X
2 Plaster City	X	X	X	X
3 Rand Mountains	X		X	X
4 Spangler Hills	X		X	X
5 Stoddard Valley	X		X	X
Total	5	2	5	5

Table R-7

OFF-ROAD-VEHICLE OPEN AREAS BY ALTERNATIVE

Open Area	No Action Alternative	Protection Alternative	Balanced Alternative	Use Alternative
1 Panamint Dunes			X	X
2 Panamint Valley				X
3 Olancha	X			
4 Dumont Dunes	X	X	X	X
5 Spangler Hills	X		X	X
6 Rand	X		X	X
7 Dove Springs	X		X	X
8 Jawbone Canyon	X		X	X
9 Bristol				X
10 Stoddard Valley	X		X	X
11 El Mirage				X
12 Johnson Valley	X	X	X	X
13 Painted Canyon				X
14 Orocopia	X	X	X	X
15 Blythe	X			X
16 McCoy Valley	X			X
17 Arroyo Salada				X
18 North Algodones	X			X
19 Plaster City	X	X	X	X
20 Yuha			X	X
21 South Algodones Dunes	X			X
a) Gecko Campground		X	X	
b) Buttercup Valley		X	X	
Total	14	6	13	20

Table R-8

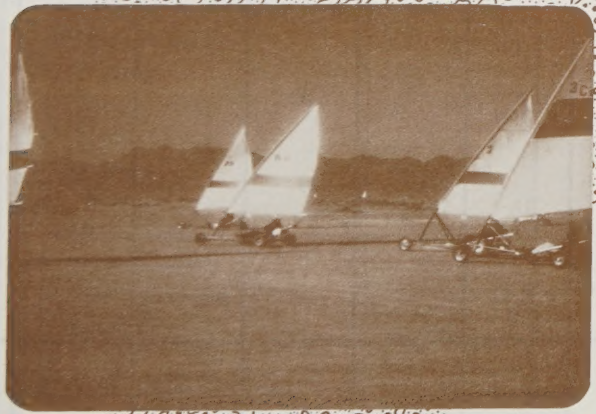
VISITOR MANAGEMENT FACILITIES

Area	Way Station	Campground	Trailhead	Parking Loop	Interpretive Kiosk	Picnic/Day Use	Field Contact Station	Education and Research
1 Joshua Flat		U					P, B	
2 Eureka Dunes					P, B, U			
3 Hunter Mountain		U					P, B	
4 Lake Hill				U				
5 Panamint Spring								P, B, U
6 Greenwater Valley			P		B			
7 Salt Creek					P, B, U			
8 Indian Wells Canyon		U	P			B		
9 Sand Canyon				U		P, B		
10 Jawbone Canyon				U	P	B		
11 Dove Spring				U	P	B		
12 Great Falls Basin		U			B	P		
13 Trona Pinnacles		U		B	P			
14 Rand Mountains				B, U				
15 Spangler Hills				B, U				
16 Tortoise Preserve					P, B, U			
17 Almond Mountain			P, B					
18 Darwin Falls/Canyon					P, B, U			
19 Dumont				P, B, U				
20 Mojave (178 & 14)							P, B, U	
21 Cajon (I-15)	P, B, U							
22 Barstow	N, P, B, U							
23 Cima (I-15)	P, B, U							
24 Clark Mountain		U	P			B		
25 Teutonia		U				P, B		
26 Afton Canyon		N, P, B, U						
27 Rainbow Basin/ Owl Canyon		N, P, B, U						
28 New York Mountains		P, B, U						
29 Fort Piute					P	B, U		
30 Mid Hills		N, P, B, U						
31 Hole in the Wall		N, P, B, U						
32 Fort Soda								N, P, B, U
33 Kelso					P, B, U			
34 Granite Pass		P, B, U						
35 Granite Mountains								P, B, U
36 Colton Hills		U	P		B			
37 Johnson Valley				B, U		P		
38 Ord-Newberry			P, B	U				
39 Mecca/Orocopia		B, U				P		
40 Deep Canyon								N, P, B, U
41 Whitewater Canyon		U				P, B		
42 Whitewater (I-10)	N, P, B, U							
43 Turtle Mountains		U					P, B	
44 Chuckwalla Bench								P, B, U
45 Wiley's Well		N, P, B, U						
46 Coon Hollow		N, P, B, U						
47 Snaggletooth		P, B, U						
48 Corn Spring		N, P, U, B						
49 Coyote Mountains		U	P			B		
50 Plaster City				P, B, U				
51 Yuha (Ocotillo)	N, P, B, U							
52 Davies Valley		P, B, U						
53 Inkopah			P, B			U		
54 North Algodones				U				
55 Algodones								P, B, U
56 Gecko		N, P, B, U						
57 Glamis		P, B, U						
58 Buttercup West				P, B, U				
59 Buttercup East		U		P, B				

Totals by Facility Type and Alternative[a]		Way Station	Campground	Trailhead	Parking Loop	Interpretive Kiosk	Picnic/Day Use	Field Contact Station	Education and Research	Totals by Alternatives	
No Action	– N	3	8	0	0	0	0	0	2	13	N
Protection	– P	5	13	8	4	9	6	4	6	55	P
Balanced	– B	5	14	3	8	8	9	4	6	57	B
Use	– U	5	26	0	12	5	2	1	6	57	U

[a] P, B, and U totals include existing developed facilities.

VISITOR REGISTER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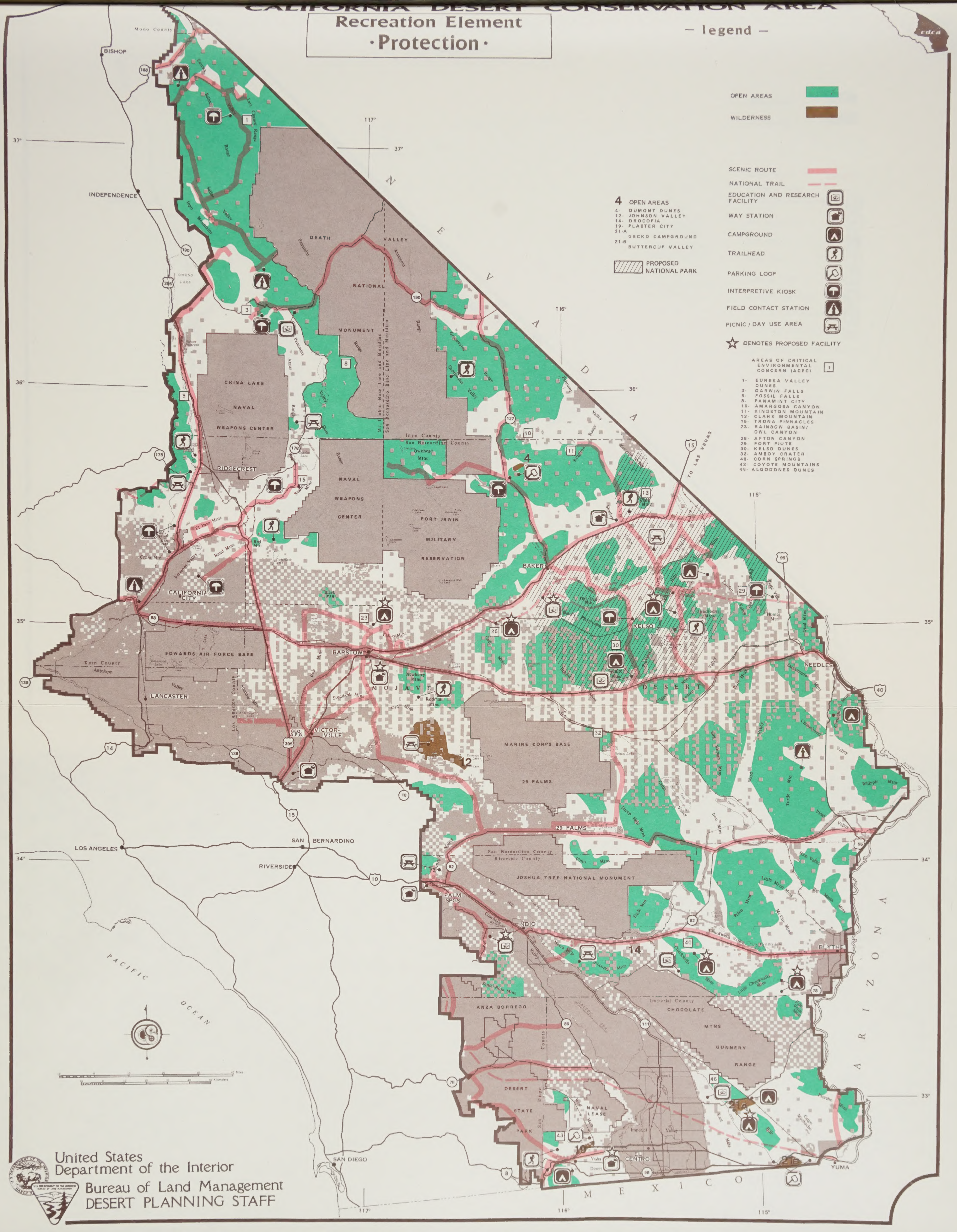
CALIFORNIA DESERT CONSERVATION AREA

Recreation Element
·Protection·



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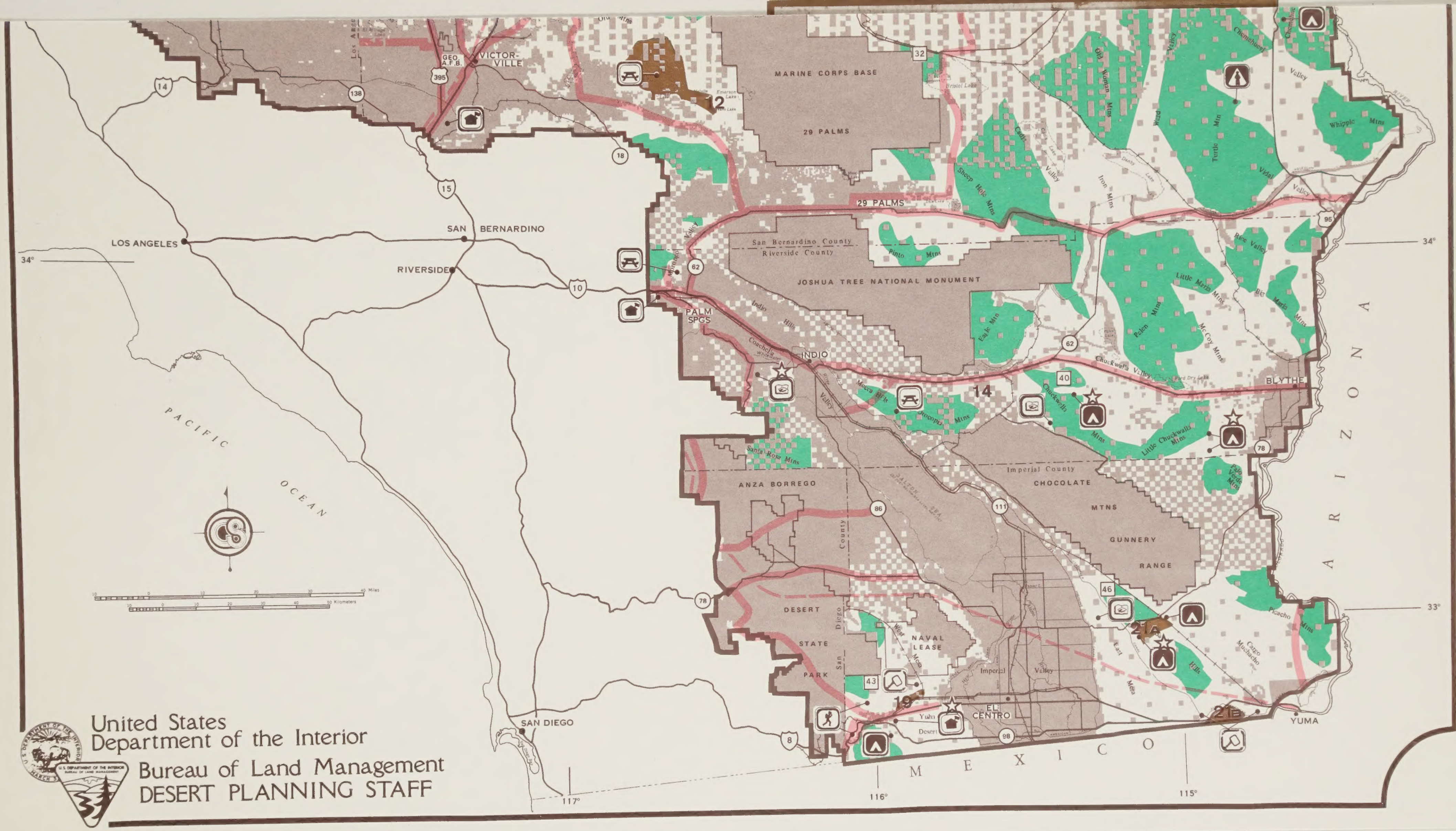
OPEN AREAS 🟩
WILDERNESS
SCENIC ROUTE
NATIONAL TRAIL
EDUCATION AND RESEARCH FACILITY
WAY STATION
CAMPGROUND
TRAILHEAD
PARKING LOOP
INTERPRETIVE KIOSK
FIELD CONTACT STATION
PICNIC / DAY USE AREA
☆ DENOTES PROPOSED FACILITY
AREAS OF CRITICAL ENVIRONMENTAL CONCERN (ACEC) 1
1- EUREKA VALLEY DUNES
3- DARWIN FALLS
5- FOSSIL FALLS
8- PANAMINT CITY
10- AMARGOSA CANYON
11- KINGSTON MOUNTAIN
13- CLARK MOUNTAIN
15- TRONA PINNACLES
23- RAINBOW BASIN/ OWL CANYON
26- AFTON CANYON
29- FORT PIUTE
30- KELSO DUNES
32- AMBOY CRATER
40- CORN SPRINGS
43- COYOTE MOUNTAINS
45- ALGODONES DUNES
4 OPEN AREAS
4- DUMONT DUNES
12- JOHNSON VALLEY
14- OROCOPIA
19- PLASTER CITY
21-A GECKO CAMPGROUND
21-B BUTTERCUP VALLEY
▨ PROPOSED NATIONAL PARK
Mono County
BISHOP
INDEPENDENCE
DEATH VALLEY NATIONAL MONUMENT
CHINA LAKE NAVAL WEAPONS CENTER
RIDGECREST
NAVAL WEAPONS CENTER
FORT IRWIN MILITARY RESERVATION
Inyo County
San Bernardino County
BAKER
KELSO
NEVADA
TO LAS VEGAS
CALIFORNIA CITY
EDWARDS AIR FORCE BASE
Kern County
LANCASTER
Los Angeles County
BARSTOW
MOJAVE DESERT
VICTORVILLE
GEO. A.F.B.
MARINE CORPS BASE 29 PALMS
29 PALMS
NEEDLES
LOS ANGELES
SAN BERNARDINO
RIVERSIDE
Riverside County
JOSHUA TREE NATIONAL MONUMENT
PALM SPGS
INDIO
BLYTHE
ARIZONA
PACIFIC OCEAN
ANZA BORREGO DESERT STATE PARK
Imperial County
CHOCOLATE MTNS GUNNERY RANGE
NAVAL LEASE
EL CENTRO
SAN DIEGO
San Diego County
YUMA
MEXICO
37°
36°
35°
34°
33°
117°
116°
115°
Miles
Kilometers

United States
Department of the Interior

Bureau of Land Management
DESERT PLANNING STAFF


VICTORVILLE
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ANZA BORREGO DESERT STATE PARK
NAVAL LEASE
EL CENTRO
Imperial Valley
SAN DIEGO
YUMA
A R I Z O N A
M E X I C O
P A C I F I C O C E A N
SALTON SEA
Old Woman Mtns
Turtle Mtn
Whipple Mtns
Chemehuevi Valley
Sheep Hole Mtns
Iron Mtns
Pinto Mtns
Eagle Mtn
Palen Mtns
Little Maria Mtns
Big Maria Mtns
McCoy Mtns
Rice Valley
Chuckwalla Valley
Chuckwalla Mtns
Little Chuckwalla Mtns
Palo Verde Mtns
Orocopia Mtns
Mecca Hills
Santa Rosa Mtns
Indio Hills
Coachella Valley
Morongo Valley
Picacho Mtns
Cargo Muchacho Mtns
East Mesa
West Mesa
Sand Hills
Yuha Desert
Vidal Valley
Cadiz Valley
Ward Valley
12
14
19
21A
21B
14
15
18
10
62
95
395
138
32
40
78
111
86
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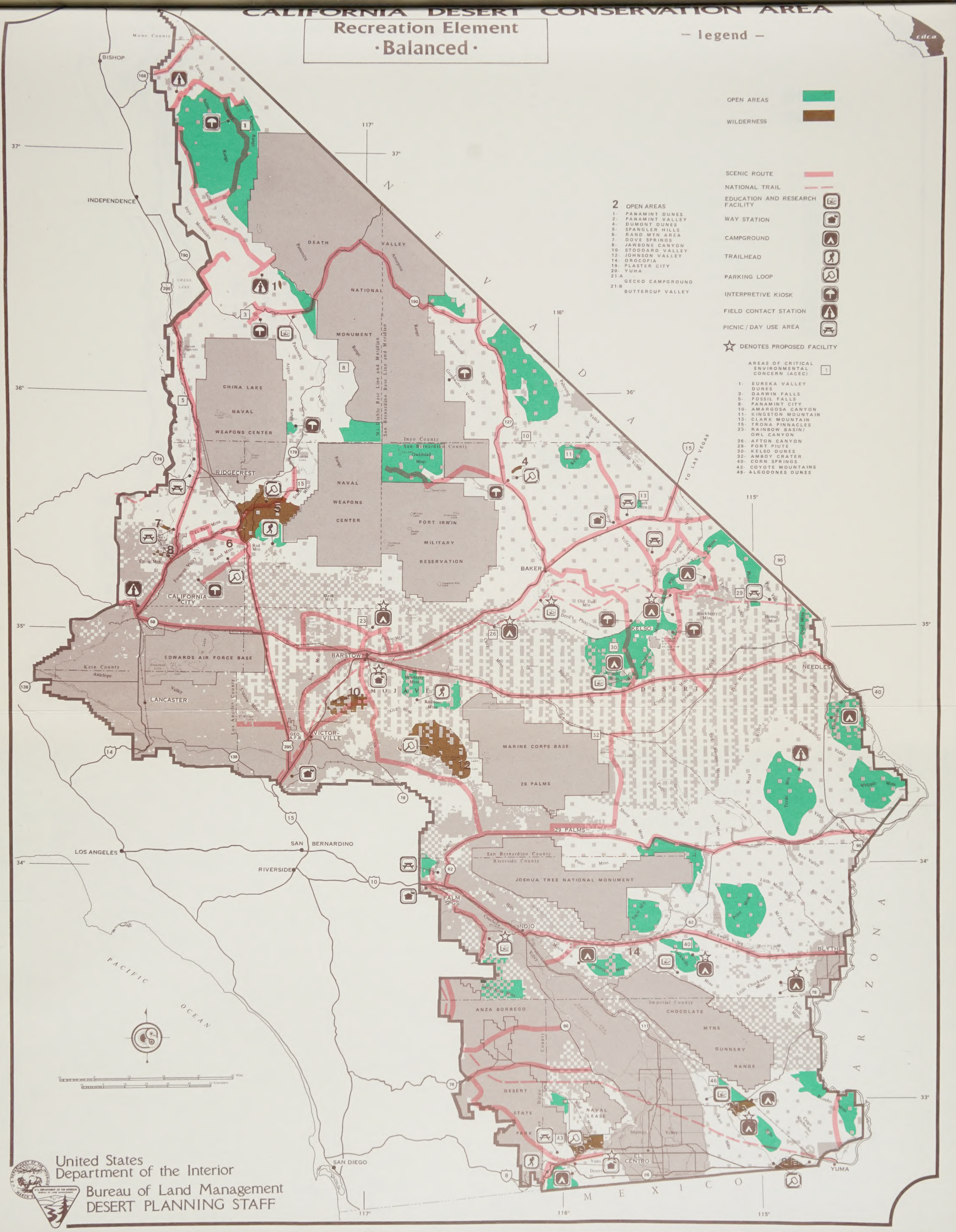
34°
33°
117°
116°
115°
0 10 20 30 40 Miles
0 10 20 30 40 50 Kilometers

United States
Department of the Interior
Bureau of Land Management
DESERT PLANNING STAFF

CALIFORNIA DESERT CONSERVATION AREA

Recreation Element
·Balanced·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cdca
OPEN AREAS 🟩
WILDERNESS ■
SCENIC ROUTE
NATIONAL TRAIL
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WAY STATION
CAMPGROUND
TRAILHEAD
PARKING LOOP
INTERPRETIVE KIOSK
FIELD CONTACT STATION
PICNIC / DAY USE AREA
☆ DENOTES PROPOSED FACILITY
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2- PANAMINT VALLEY
4- DUMONT DUNES
5- SPANGLER HILLS
6- RAND MTN AREA
7- DOVE SPRINGS
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DEATH VALLEY NATIONAL MONUMENT
CHINA LAKE NAVAL WEAPONS CENTER
NAVAL WEAPONS CENTER
FORT IRWIN MILITARY RESERVATION
RIDGECREST
CALIFORNIA CITY
EDWARDS AIR FORCE BASE
LANCASTER
BARSTOW
BAKER
KELSO
NEEDLES
VICTORVILLE
GEO A.F.B.
MARINE CORPS BASE 29 PALMS
29 PALMS
JOSHUA TREE NATIONAL MONUMENT
PALM SPGS
INDIO
BLYTHE
ANZA BORREGO DESERT STATE PARK
CHOCOLATE MTNS GUNNERY RANGE
NAVAL LEASE
EL CENTRO
YUMA
SAN BERNARDINO
LOS ANGELES
RIVERSIDE
SAN DIEGO
Inyo County
San Bernardino County
Kern County
Los Angeles County
Riverside County
Imperial County
MOJAVE DESERT
NEVADA
ARIZONA
MEXICO
PACIFIC OCEAN
TO LAS VEGAS
Mt. Diablo Base Line and Meridian
San Bernardino Base Line and Meridian
37°
36°
35°
34°
33°
117°
116°
115°

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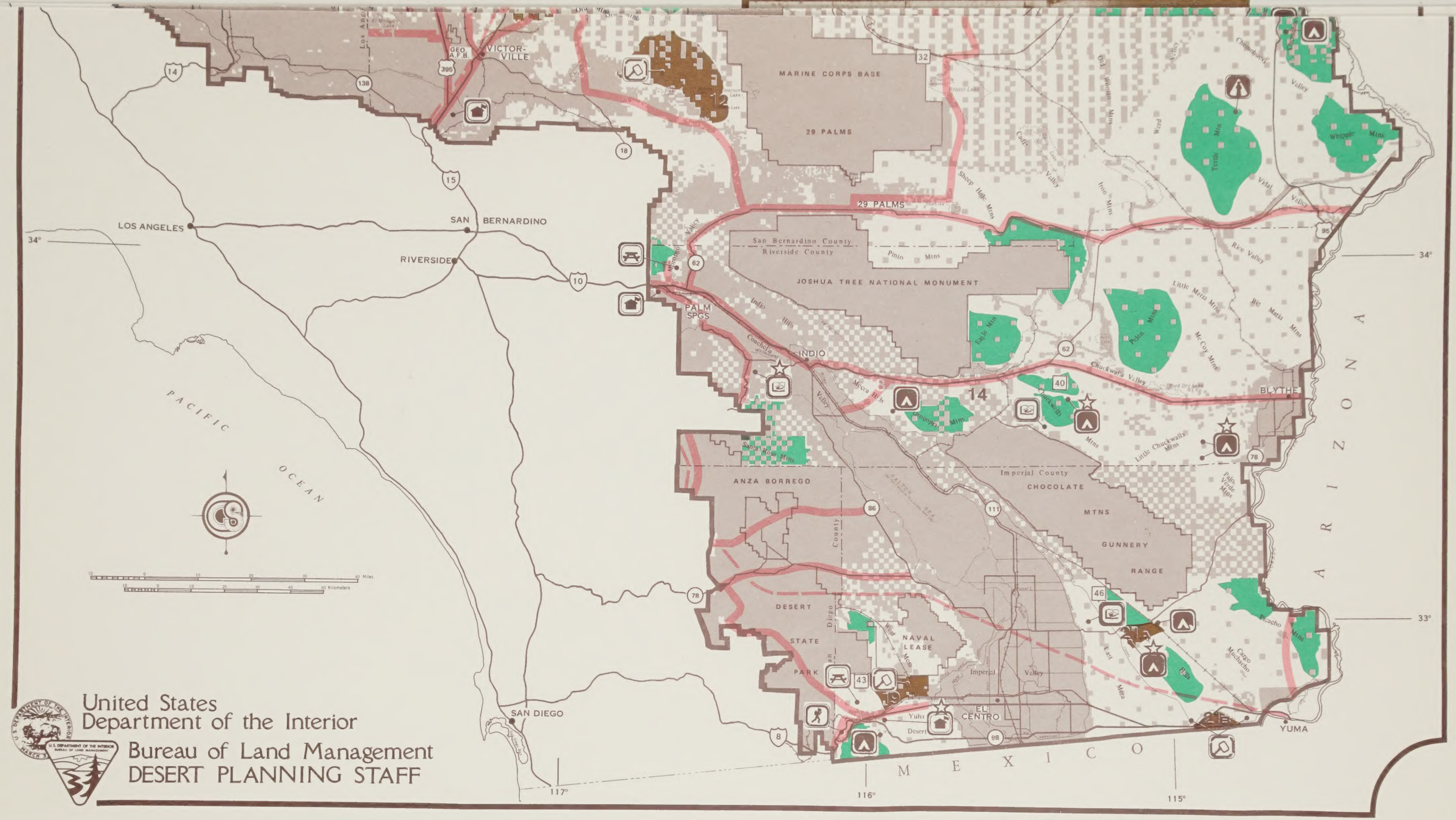
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SAN BERNARDINO
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VICTORVILLE
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YUMA
SAN DIEGO
MARINE CORPS BASE
29 PALMS
JOSHUA TREE NATIONAL MONUMENT
San Bernardino County
Riverside County
Imperial County
San Diego County
ANZA BORREGO DESERT STATE PARK
CHOCOLATE MTNS GUNNERY RANGE
NAVAL LEASE
SALTON SEA
PACIFIC OCEAN
ARIZONA
MEXICO
34°
33°
117°
116°
115°
14
12
Miles
Kilometers

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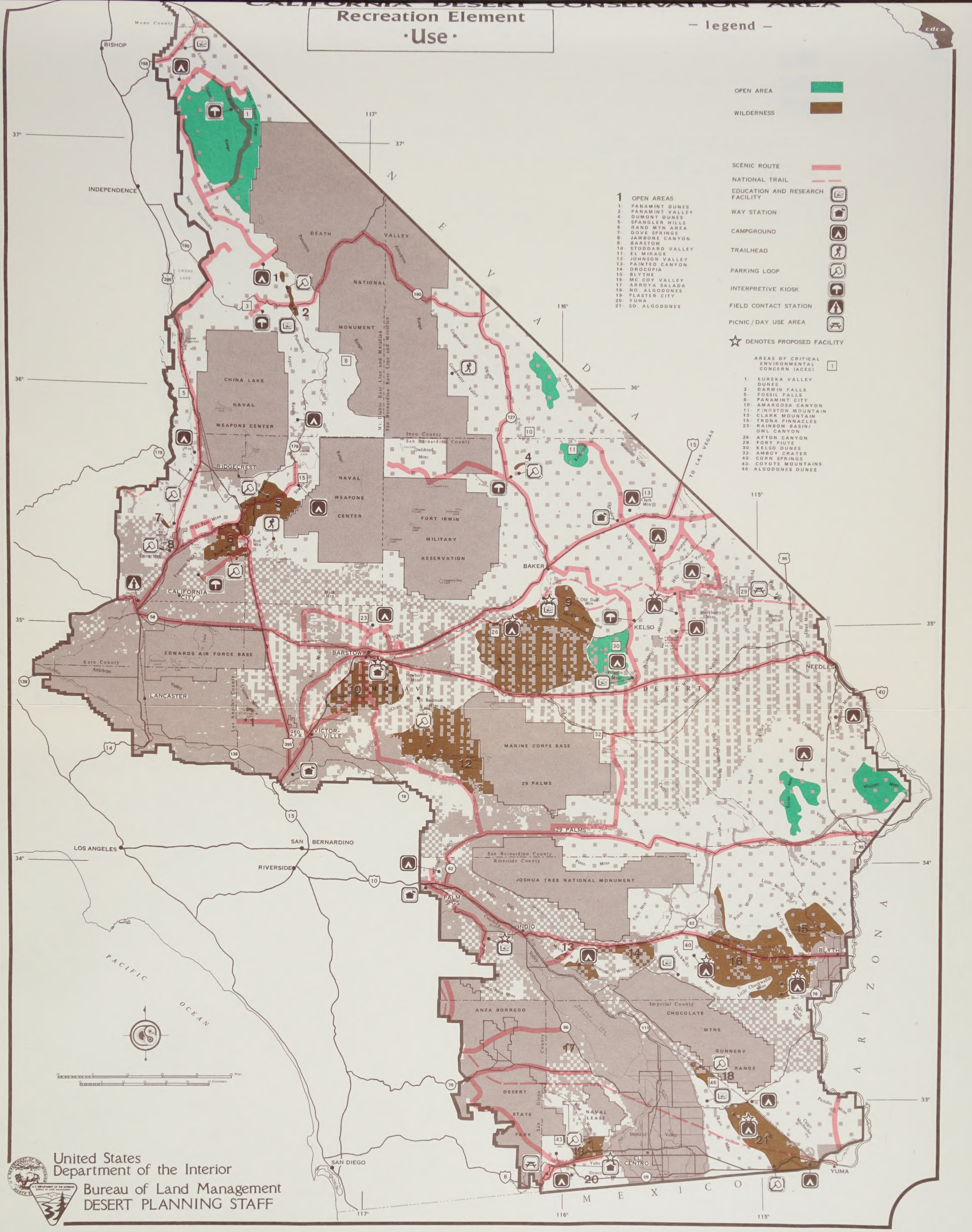
CALIFORNIA DESERT CONSERVATION AREA

Recreation Element
·Use·



cdca
– legend –
OPEN AREA
WILDERNESS
SCENIC ROUTE
NATIONAL TRAIL
EDUCATION AND RESEARCH FACILITY
WAY STATION
CAMPGROUND
TRAILHEAD
PARKING LOOP
INTERPRETIVE KIOSK
FIELD CONTACT STATION
PICNIC / DAY USE AREA
☆ DENOTES PROPOSED FACILITY
1 OPEN AREAS
1- PANAMINT DUNES
2- PANAMINT VALLEY
4- DUMONT DUNES
5- SPANGLER HILLS
6- RAND MTN AREA
7- DOVE SPRINGS
8- JAWBONE CANYON
9- BARSTOW
10- STODDARD VALLEY
11- EL MIRAGE
12- JOHNSON VALLEY
13- PAINTED CANYON
14- OROCOPIA
15- BLYTHE
16- MC COY VALLEY
17- ARROYA SALADA
18- NO. ALGODONES
19- PLASTER CITY
20- YUHA
21- SO. ALGODONES
AREAS OF CRITICAL ENVIRONMENTAL CONCERN (ACEC) 1
1- EUREKA VALLEY DUNES
3- DARWIN FALLS
5- FOSSIL FALLS
8- PANAMINT CITY
10- AMARGOSA CANYON
11- KINGSTON MOUNTAIN
13- CLARK MOUNTAIN
15- TRONA PINNACLES
23- RAINBOW BASIN/ OWL CANYON
26- AFTON CANYON
29- FORT PIUTE
30- KELSO DUNES
32- AMBOY CRATER
40- CORN SPRINGS
43- COYOTE MOUNTAINS
46- ALGODONES DUNES
Mono County
BISHOP
INDEPENDENCE
37°
36°
35°
34°
33°
117°
116°
115°
NEVADA
TO LAS VEGAS
DEATH VALLEY NATIONAL MONUMENT
CHINA LAKE NAVAL WEAPONS CENTER
NAVAL WEAPONS CENTER
FORT IRWIN MILITARY RESERVATION
Inyo County
San Bernardino County
Mt. Diablo Base Line and Meridian
San Bernardino Base Line and Meridian
RIDGECREST
CALIFORNIA CITY
EDWARDS AIR FORCE BASE
Kern County
Antelope Valley
LANCASTER
Los Angeles County
GEO A.F.B.
VICTORVILLE
BARSTOW
MOJAVE DESERT
BAKER
KELSO
NEEDLES
MARINE CORPS BASE 29 PALMS
29 PALMS
LOS ANGELES
SAN BERNARDINO
RIVERSIDE
San Bernardino County
Riverside County
JOSHUA TREE NATIONAL MONUMENT
PALM SPGS
INDIO
BLYTHE
Imperial County
CHOCOLATE MTNS GUNNERY RANGE
ANZA BORREGO DESERT STATE PARK
NAVAL LEASE
EL CENTRO
YUMA
SAN DIEGO
PACIFIC OCEAN
ARIZONA
MEXICO

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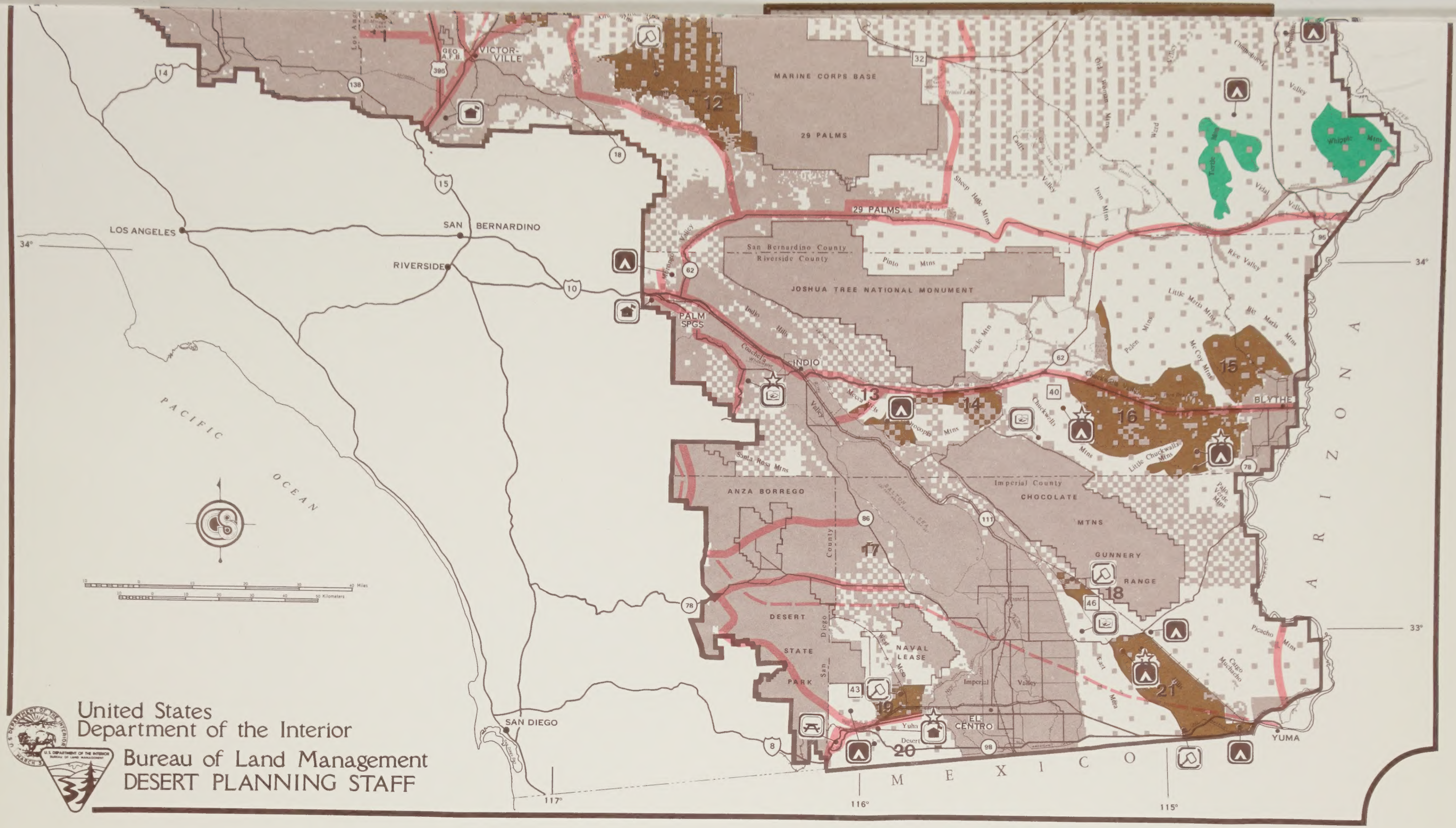
VICTORVILLE
GEO A.F.B.
MARINE CORPS BASE
29 PALMS
29 PALMS
LOS ANGELES
SAN BERNARDINO
RIVERSIDE
34°
San Bernardino County
Riverside County
JOSHUA TREE NATIONAL MONUMENT
Pinto Mtns
Sheep Hole Mtns
Iron Mtns
Old Woman Mtns
Turtle Mtns
Whipple Mtns
Rice Valley
Vidal Valley
Little Maria Mtns
Big Maria Mtns
McCoy Mtns
Palen Mtns
Eagle Mtn
PALM SPGS
INDIO
Coachella Valley
Indio Hills
Mecca Hills
Orocopia Mtns
Chuckwalla Mtns
Little Chuckwalla Mtns
BLYTHE
Palo Verde Mtns
PACIFIC OCEAN
Santa Rosa Mtns
ANZA BORREGO DESERT STATE PARK
San Diego County
Imperial County
CHOCOLATE MTNS
GUNNERY RANGE
SALTON SEA
NAVAL LEASE
West Mesa
East Mesa
Imperial Valley
Picacho Mtns
Cargo Muchacho Mtns
EL CENTRO
Yuha Desert
SAN DIEGO
YUMA
ARIZONA
MEXICO
117°
116°
115°
33°
12
13
14
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16
17
18
19
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14
138
395
18
15
10
62
8
78
86
111
98
95
32
40
43
46
Miles
Kilometers

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CALIFORNIA DESERT CONSERVATION AREA

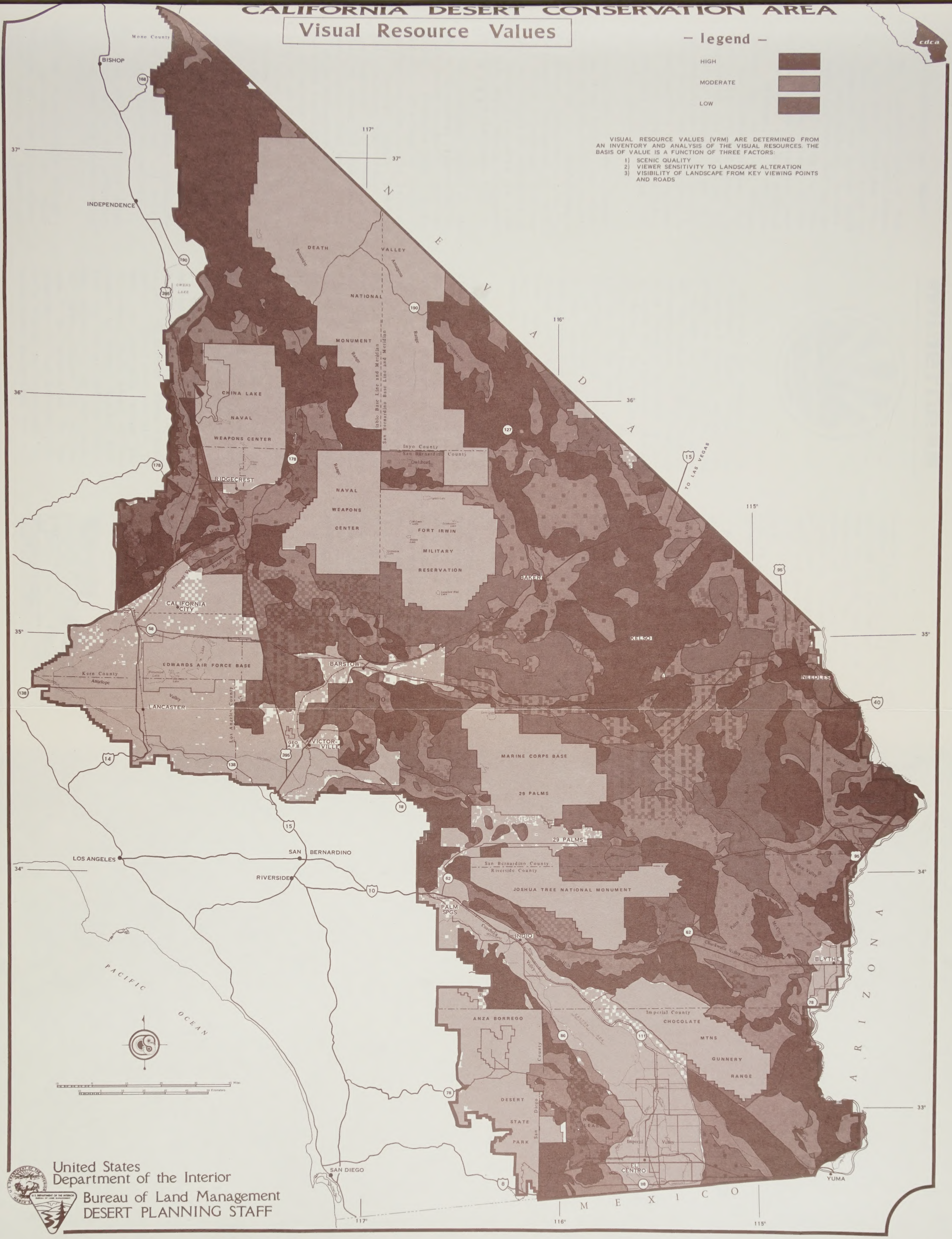
Visual Resource Values

– legend –

- HIGH ▨
- MODERATE ▨
- LOW ▨

VISUAL RESOURCE VALUES (VRM) ARE DETERMINED FROM AN INVENTORY AND ANALYSIS OF THE VISUAL RESOURCES. THE BASIS OF VALUE IS A FUNCTION OF THREE FACTORS:

1) SCENIC QUALITY
2) VIEWER SENSITIVITY TO LANDSCAPE ALTERATION
3) VISIBILITY OF LANDSCAPE FROM KEY VIEWING POINTS AND ROADS



cdca
Mono County
BISHOP
INDEPENDENCE
37°
36°
35°
34°
33°
117°
116°
115°
NEVADA
DEATH VALLEY NATIONAL MONUMENT
CHINA LAKE NAVAL WEAPONS CENTER
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CHOCOLATE MTNS GUNNERY RANGE
EL CENTRO
YUMA
ARIZONA
MEXICO
Miles
Kilometers

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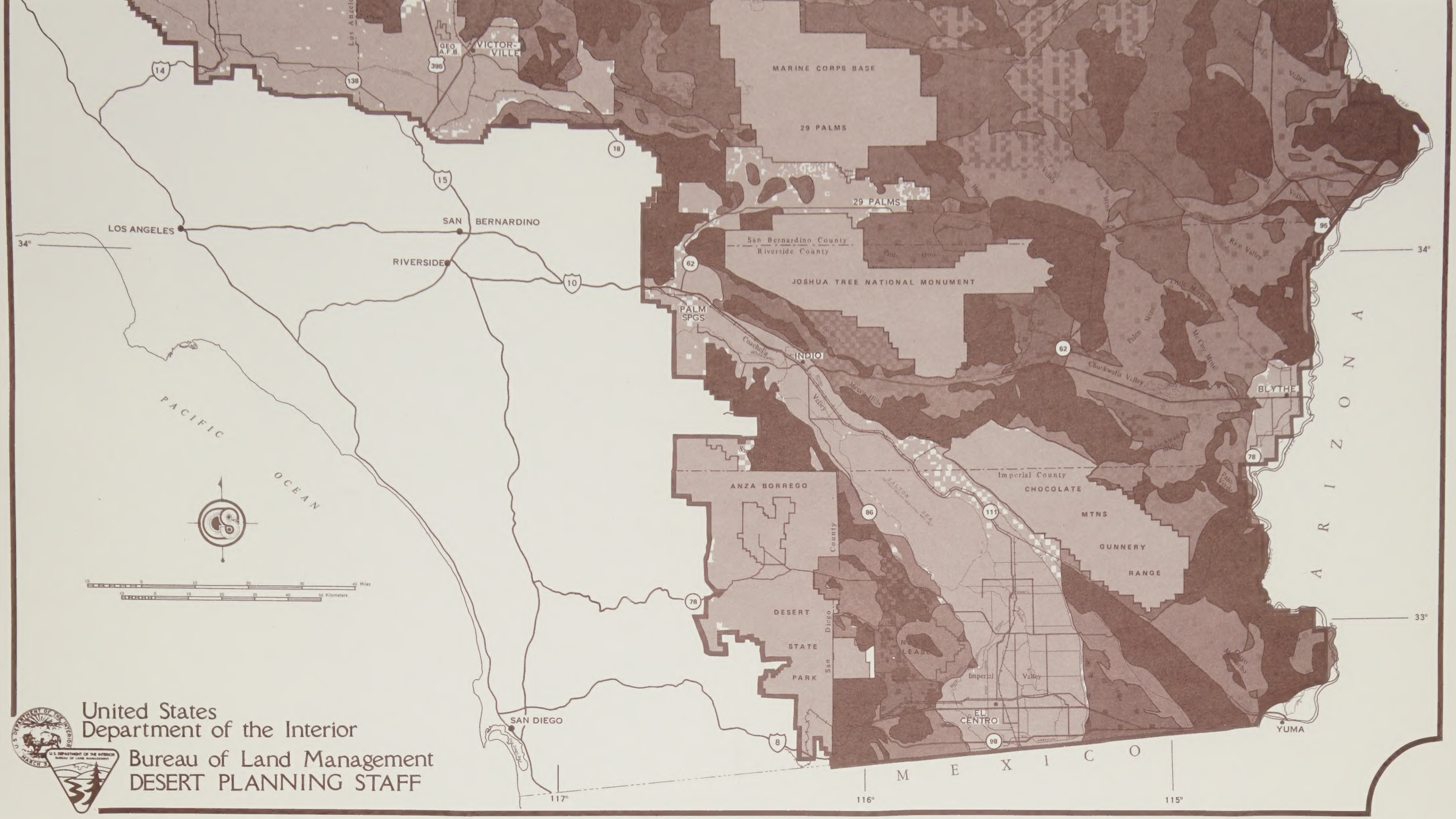
VICTOR-VILLE
GEO A.F.B.
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MARINE CORPS BASE
29 PALMS
29 PALMS
LOS ANGELES
SAN BERNARDINO
RIVERSIDE
34°
San Bernardino County
Riverside County
JOSHUA TREE NATIONAL MONUMENT
62
10
PALM SPGS
Coachella
INDIO
Chuckwalla Valley
BLYTHE
95
Rice Valley
McCoy Mtns
Palen Mtns
Iron Mtns
A R I Z O N A
78
PACIFIC OCEAN
ANZA BORREGO
Imperial County
CHOCOLATE MTNS GUNNERY RANGE
SALTON SEA
86
111
DESERT STATE PARK
San Diego County
Imperial Valley
EL CENTRO
98
8
SAN DIEGO
YUMA
M E X I C O
117°
116°
115°
33°
10 0 10 20 30 40 Miles
10 0 10 20 30 40 50 Kilometers

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C-3
Wilderness

BACKGROUND and ISSUES

The Wilderness Act of 1964 provided for the establishment of a National Wilderness Preservation System with areas to be designated from public lands within the National Forests, the National Parks, and the National Wildlife Refuges. Public lands administered by the Bureau of Land Management were not included in the original Act. However, in 1976, the Federal Land Policy and Management Act (FLPMA) directed that lands under BLM jurisdiction be inventoried and evaluated for wilderness potential, and that recommendations be made to Congress as to the suitability or non-suitability of each wilderness study area for inclusion in the National Wilderness Preservation System.

The California Desert Conservation Area (CDCA) was established by FLPMA with a mandate to provide a comprehensive desertwide management plan to Congress by September 30, 1980. This short timeframe required that wilderness be evaluated in the Conservation Area in time to have those values considered in the desertwide plan.

The inventory phase of the BLM's Wilderness Program in the CDCA began in April, 1978 and ended in February 1979. It was a period of extensive field investigation and public involvement through public hearings and workshops and through written comments. As a result, 5.7 million acres of BLM-administered public land were identified as Wilderness Study Areas, or lands fulfilling the criteria of Section 2(c) of the Wilderness Act of 1964. According to these criteria, an area suitable for wilderness has the following qualities:

❶ generally appears affected primarily by the forces of nature with man's work basically unnoticeable;

❷ has outstanding opportunities for solitude, or primitive, unconfined recreation;

❸ has at least 5,000 acres of land, or is of sufficient size to make its preservation practical;

❹ may also contain ecological, geological, or other features of scientific, educational, scenic or historical value.

Following the designation of Wilderness Study Areas, the Wilderness Program entered its second, or "study," phase. The first part of the study phase was the analysis which led to recommendations of Wilderness Study Areas as suitable or nonsuitable for wilderness status, equivalent to Multiple Use Class C designation. The proportion of the total number of Wilderness Study Areas judged to be suitable was determined by the overall objectives for each alternative. The methodology used and the many factors taken into consideration are described in the next section.

The study phase will continue through the rest of the desert planning program until completion of the plan on September 30, 1980. Each Wilderness Study Area recommended as suitable for wilderness preservation in the adopted plan will be given an appropriate name, and its legal boundary will be defined. A management plan will be formulated and subjected to an environmental analysis. Concurrently, a mineral survey will be conducted by the U.S. Geological Survey and the U.S. Bureau of Mines. Following these studies the Secretary of the Interior will submit his recommendations to the President, who, within two years, must give final recommendations to the Congress.

Congress will make the final determination on which areas will be included in the National Wilderness Preservation System. Until that decision is made, the BLM will manage all Wilderness Study Areas as directed by FLPMA, Section 603; that is, "so as not to impair the suitability of such areas for preservation of wilderness," as prescribed in the Department of the Interior "Interim Policy and Guidelines for Lands Under Wilderness Review," December, 1979. Mineral and grazing uses will be allowed to continue in the manner and degree in which they were being conducted on the date of approval of the Act. The BLM is directed to prevent unnecessary or undue degradation of the lands and their resources, and to afford environmental protection. Valid existing rights must be recognized in the management of these areas.

During the interim management period, implementation of the desert plan in those wilderness study areas which have been placed in multiple use classes L, M, and I will be constrained by the fact that many uses allowed in those classes might impair wilderness suitability. Thus, any new uses may have to be delayed until Congress has acted. Examples of uses which would be incompatible are new utility corridors, power generating stations, and competitive areas for off-road vehicles.

APPROACH

For each alternative, the Wilderness Element focuses on suitability recommendations for each of the 138 wilderness study areas. It describes the methodology used in making recommendations for or against wilderness designation, portrays graphically the location of suitable and nonsuitable areas and summarizes in matrix form the recommendation for each wilderness study area by alternative.

Maps

For each land use alternative, a map identifies those Wilderness Study Areas (WSA's) which are recommended for wilderness designation and those which were not recommended. Also shown are existing and proposed wilderness areas adjoining or within the CDCA which are managed by the National Park Service, the U. S. Forest Service, and the California State Parks and Recreation Service.

Methodology

Several features were evaluated in determining the appropriate multiple use classification for each area of the CDCA under the alternative land use plans. These factors briefly described in the Development of Alternative section of the Introduction, were each considered and compared in reaching a recommendation for wilderness designation. The weight given to the different factors varied according to the overall objective of each alternative. For example, high mineral and grazing values were given greater weight than all but the highest wilderness qualities for the Use Alternative, while cultural, wildlife, scenic, and wilderness values were weighted most heavily for the Protection Alternative.

Four additional criteria which were applicable specifically to Class C were also evaluated. These include:

❶ Public Opinion. Public demand for or against wilderness is an important consideration in recommending wilderness status. Also, sections 202(a) and 202(f) of FLPMA call for public involvement in the formulation of land use plans. Thus, in evaluating lands for possible Class C designation, it was appropriate to consider the many comments made by members of the public with respect to wilderness. Most of the comments were made during the inventory phase of the Wilderness Program, including testimony made at the public hearings. Additional public input was received during the study phase of the program, which began in February 1979.

❷ Relative Wilderness Qualities. WSA's were ranked according to relative wilderness qualities into four groups: outstanding, good, fair, and poor. In addition to the 2(c) criteria of size, natural condition, solitude and opportunity for primitive recreation, the following qualities were considered:

--Ecological uniqueness and diversity;
--Geological uniqueness and diversity;
--Scenery;
--Adjacent wilderness;
--Manageability;
--Accessibility;
--Previous recreational use;
--Historical and cultural values;
--Nearness to population centers

This ranking of WSA's into each of the four groups is shown in Table W-1, page 80.

❸ Manageability: Adjustments and Rehabilitation. Adjustments in the boundaries of several WSA's were recommended in order to meet manageability criteria. In the Balanced and Use Alternatives, some boundaries were contracted, while in the Balanced and Protection Alternatives some of the WSA's were enlarged to include contiguous areas or enclaves which would be suitable for wilderness designation following minor rehabilitation.

❹ Intrusive Sights and Sounds. Adjacent or nearby features can be detrimental to wilderness quality. Examples of intrusive sights are utility lines, mineral operations, range improvements and transportation routes. Examples of sources of intrusive sounds are highways, railroads, aircraft corridors, recreation vehicles, and military operations.

WILDERNESS STUDY AREA CLASSIFICATIONS BY ALTERNATIVE

Table W-1, on the following page, displays all Wilderness Study Areas, indexed by inventory number and correlated to the 107 planning areas in which they occur. Ranking in terms of basic wilderness quality are noted for each WSA and the multiple use class designation assigned by alternative is indicated. WSAs showing 2 or more class designations per area indicate that multiple use evaluation has indicated that several classes are needed within the planning area to meet the alternative objectives. The study areas in which no wilderness (Class C) is recommended under any alternative generally indicate manageability problems for wilderness designations or a high value competing resource use opposing lower level wilderness values.

Table W-1

CLASSIFICATION OF WILDERNESS STUDY AREAS BY ALTERNATIVE

WSA	Planning Areas	Ranking	Protection Alternative				Balanced Alternative				Use Alternative			
			C	L	M	I	C	L	M	I	C	L	M	I
100A	1	Poor		X				X					X	
100	1	Poor		X				X					X	
101	1	Poor		X				X					X	
102	1	Poor	X	X				X				X	X	
103	1	Poor	X	X				X				X	X	
104	1	Poor	X	X				X				X	X	
105	1	Poor		X				X					X	
107A	1	Poor		X				X					X	
111	2, 5	Fair	X					X				X	X	
112	5	Good	X					X	X			X	X	
115	3, 4, 6	Good	X	X				X	X			X	X	
117	6, 7, 9, 11	Outstanding	X				X	X	X		X	X	X	
117A	12	Poor	X					X					X	
118	8	Poor		X				X					X	
119	8	Outstanding	X					X				X	X	
120	10	Outstanding	X					X				X		
121	12	Fair	X					X					X	
122	10	Fair	X		X			X		X		X	X	X
123	12	Outstanding	X					X				X	X	
124	13	Good	X	X				X	X			X	X	
127	14, 15	Outstanding	X	X			X	X	X			X	X	
130	16	Poor		X					X				X	
131	16	Poor		X				X	X				X	
132	26	Fair	X				X					X		
132A	23	Outstanding	X					X					X	
132B	23	Fair	X					X					X	
134	24	Outstanding	X				X	X	X			X	X	X
136	25	Good	X					X				X	X	
137	25	Outstanding	X					X				X		
137A	25	Fair	X					X				X		
142	24, 25, 26	Outstanding	X				X	X	X			X	X	
143	42	Good	X	X			X	X	X			X	X	
145	44	Outstanding	X	X			X	X	X			X	X	
147	43, 45	Fair	X	X				X	X			X	X	
148	46	Outstanding	X					X				X	X	
149	47	Fair		X	X			X	X				X	X
149A	47	Fair		X				X					X	
150	48	Outstanding	X				X	X			X		X	
150A	48	Poor		X				X	X				X	X
154	50	Poor		X					X				X	
156	53	Outstanding	X				X					X		
157	17	Good	X					X				X		
158	18	Good	X					X				X	X	
159	19	Fair	X					X					X	
160	19	Fair	X					X					X	
160B	19	Poor		X				X					X	
160C	19	Fair	X					X					X	
163	19	Fair	X					X					X	
164	20	Good	X	X				X				X	X	
170	28	Outstanding	X				X		X			X	X	X
172	28	Fair	X					X					X	X
173	28	Good	X					X					X	
173A	28	Poor		X				X					X	
184	19	Good		X				X					X	
186C	32	Good	X					X					X	
206	39	Good	X				X					X		
207	39	Good	X				X					X	X	
217	41	Outstanding	X					X				X		
218	85	Good	X					X				X		
218A	85	Outstanding	X				X					X		
219	47	Poor		X				X					X	
220	47	Poor		X				X					X	
221	54	Outstanding	X					X	X				X	
221A	54	Good	X					X	X				X	
222	49, 52, 55	Outstanding	X	X			X	X	X		X		X	
222A	52	Poor		X					X				X	
223	51	Poor		X				X					X	
225	51	Fair	X	X				X					X	
225A	51	Poor		X				X					X	
227	65	Good	X				X	X	X			X	X	

Table W-1 (continued)

WSA	Planning Areas	Ranking	Protection Alternative				Balanced Alternative				Use Alternative			
			C	L	M	I	C	L	M	I	C	L	M	I
228	57	Fair	X	X					X				X	
235A	66	Poor		X				X					X	
237	66	Poor		X				X					X	
237A	66	Poor		X				X					X	
237B	66	Poor		X				X					X	
238A	66	Poor	X					X					X	
238B	66	Fair	X					X					X	
239	60	Good	X					X					X	
242	34, 56	Good	X	X				X					X	
243	59	Fair	X					X					X	X
244	60	Poor	X					X					X	
245	66	Fair		X				X					X	
249	59, 61	Fair	X					X					X	X
250	62, 63	Outstanding	X				X	X	X		X	X	X	
251	58	Fair	X	X				X	X				X	X
251A	58	Poor		X					X					X
252	63	Poor		X					X					X
256	63	Outstanding	X				X		X				X	X
258	64	Fair		X					X				X	
258A	64	Poor		X					X				X	
259	74	Poor		X					X				X	
260	74	Fair	X					X					X	
262	70	Fair	X				X	X					X	
263	70	Outstanding	X				X	X				X		
264	70	Fair	X				X	X				X	X	
265	69	Good	X				X	X					X	
266	69	Good	X				X	X					X	
267	72	Outstanding	X				X	X				X		
270	71	Good	X					X					X	
271	71	Fair	X					X	X				X	
272	72	Poor	X					X					X	
276	73	Poor	X				X	X					X	
288	75	Poor	X	X					X				X	
288A	75	Poor		X					X				X	
290	77	Good	X					X				X		
292	77	Good	X					X	X			X	X	
294	76	Good	X	X				X	X				X	
295	75	Fair	X	X				X					X	
299	82	Good	X	X				X	X			X	X	
300	82	Poor	X						X				X	
304	80	Fair	X					X	X				X	
304A	64	Good	X					X					X	
305	79, 80	Good	X					X					X	
307	83	Outstanding	X	X			X	X	X		X		X	
310	78	Outstanding	X				X					X		
312	84	Outstanding	X	X			X	X	X		X		X	
321	93	Fair	X					X	X				X	
322	93	Fair	X						X				X	
325	90, 91, 92	Outstanding	X	X			X	X	X				X	X
328	87, 88	Outstanding	X				X	X				X	X	
328A	88	Fair	X					X					X	
334	89	Outstanding	X				X					X		
334A	89	Fair	X					X					X	
335	87	Good	X					X	X				X	
341	94	Outstanding	X	X			X	X				X		
343	97	Good	X					X					X	X
344	97	Good	X			X	X	X		X		X	X	X
348	98	Good	X	X			X	X	X				X	X
350	99	Fair	X	X				X	X				X	X
352	100	Good	X	X				X				X		
355	101	Good	X				X					X		
355A	101	Outstanding	X				X					X		
356	101	Outstanding	X				X	X				X		
360	103	Outstanding	X				X					X		
362	103	Good	X					X						X
368	106	Outstanding	X				X					X		
372	105	Outstanding	X				X					X		
373	106	Fair	X					X		X			X	X

IMPLEMENTATION ASSUMPTIONS

It is assumed that the plan will be completed on schedule and signed for implementation by September 30, 1980. The study and report phases of the Wilderness program will continue for a period which could legally extend for up to 11 years from this date as per Section 603 of FLPMA, but which, it is assumed here, will amount to 2 years. During this time wilderness designation will be named, their legal boundaries will be described, and management plans will be formulated for them and they will be assessed for environmental impact.

Mineral surveys will be conducted by the U.S. Geological Survey and the U.S. Bureau of Mines.

At the close of this period the Secretary of Interior will recommend to the President those public lands in the California Desert Conservation Area which are suitable and nonsuitable for wilderness preservation. Within two years of that time, the President must make his recommendations to Congress, which for planning assumptions it is assumed, will act within one year.

During the estimated five-year period between plan approval and official wilderness designation by Congress, those access routes within proposed wilderness areas, identified during the wilderness inventory process, will be open to motorized vehicle access until the completion of Wilderness Management Plans for each area. These plans, which will be finished in the first two years following adoption of the California Desert Plan, will designate both those roads and ways which remain open to use and those closed to use. This designation will be effective immediately upon completion of these proposed management plans. The final wilderness management plans, approved after official wilderness designation, may in some cases permanently establish "cherry stem" motorized vehicle access corridors consistent with wilderness objectives.

* * *

WILDERNESS

Plan Alternatives

● NO ACTION ALTERNATIVE ●

No wilderness element was prepared for the "No Action" alternative. There are no recommended wilderness areas presently existing on public lands within the California Desert Conservation Area and no additional management actions are proposed under this alternative.

Wilderness Study Areas, designated in response to Section 603 of FLPMA, are also not included in the "No Action" alternative. This alternative was developed in February 1979, prior to Wilderness Study Area designations. Consideration of interim effects of such study area designations would seriously mask the environmental impacts inherent in a "No Action" alternative.

● PROTECTION ALTERNATIVE ●

Relationship to Issues

This alternative provides maximum protection to all wilderness values and associated natural and cultural resources. Through wilderness designation and limiting of vehicular access, this plan ensures the protection of the widest range and total area of wilderness values, while providing opportunities for use and development of resources in areas that do not pose risks to wilderness and associated natural and cultural values.

> "There is excessive emphasis on mountain top-type of terrain, ignoring other desert landforms. We need a balanced approach..."

Objective

To provide for expansion of the National Wilderness Preservation System to include the widest range, number, and total amount of new wilderness areas encompassing the great variety of wilderness values identified in the California desert which are capable of management and protection.

Element Components

The wilderness element of the Protection Alternative consists of 108 separate study areas recommended for wilderness designation, totaling 5.2 million acres. These areas are located throughout the California desert encompassing the range of desert terrains and enviroments, with predominately "fair" to "outstanding" wilderness qualities. These areas are shown on the Protection Wilderness Element Map (Page 86). For reference, areas dropped from consideration after applying decision criteria are also shown on this map.

● BALANCED ALTERNATIVE ●

Relationship to Issues

The Balanced Alternative attempts to strike a balance between the use and development of the desert's resources and the protection and preservation of a representative spectrum of the desert's wilderness values. To this end, WSA's evaluated as having good to outstanding qualities were favored, and decisions or nominations were based on comparison of the relative significance of nonwilderness resource values.

> "Some say the whole desert is a wilderness; others say there is no wilderness at all. It seems to me to be whether you like wilderness or not."

Objective

To recommend for wilderness designation a representative desertwide array of those Wilderness Study Areas with high wilderness qualities and moderate to low "alternative resource" values, thus achieving the goal of desertwide balance of use and protection.

Element Components

The wilderness element under the Balanced Multiple Use Alternative consists of 39 separate recommended wilderness areas totalling 1.8 million acres. These recommended areas are dispersed throughout the California Desert Conservation Area; several are close to the Los Angeles and San Diego metropolitan areas. Wilderness qualities are predominately "good" to "outstanding" and a variety of terrain types is represented, with mountainous terrain most prevalent. These areas are shown on the Balanced Wilderness Element Map (Page 87), along with WSA's dropped from consideration after applying the decision criteria of this alternative.

● USE ALTERNATIVE ●

Relationship to Issues

The Use Alternative recommends only selected Wilderness Study Areas with outstanding wilderness qualities, while opening most of the desert lands for use, production, consumption, and development of desert resources.

> "Only areas that are roadless are suitable for wilderness.... not those which have been used for years and are now arbitrarily termed roadless by bureaucrats."

Objective

To recommend for wilderness designation only those wilderness study areas which have outstanding wilderness qualities and low potential for resource use and development, thus minimizing wilderness associated restrictions on development and use of other resource values.

Element Components

The wilderness element under the Use Alternative recommends for designation 6 separate Wilderness Study Areas, totalling 602,000 acres. These recommended areas are in the outlying portions of the California Desert Conservation Area; they have outstanding wilderness qualities and terrain which does not easily permit access by vehicle. Areas recommended for wilderness designation are shown on the Use Wilderness Element Map (Page 88). Study areas dropped from consideration after application of decision criteria are also provided on this map for reference.

COMPARATIVE ANALYSIS OF THE ALTERNATIVES

The Protection Alternative incorporates a diverse spectrum of wilderness types and qualities, many of which do not conform to the concept of "wilderness" which was popular in the days before passage of the Federal Land Policy and Management Act. The proposed wilderness areas include not only mountain ranges, but also a variety of land types, including flatlands, valleys, sand dunes, playas, alluvial fans, rock outcroppings and washes. They are widely dispersed through the Sonoran, Mojave, and Great Basin deserts of the California desert and range in size from "pocket" areas of 5,000 acres to vast expanses of over one million acres. In brief, they take up over 43 percent of the BLM-administered public lands of the CDCA and encompass all types of desert lands.

In the Balanced Alternative, approximately 15 percent of the BLM-administered CDCA lands, or 1.8 million acres, is recommended for wilderness designation. These areas are well dispersed over the entire CDCA and incorporate most types of desert land classes. They range in size from 6,000 to 350,000 acres. Some are relatively close to urban centers, providing access for weekend hikers, photographers, and other wilderness recreationists. High to outstanding wilderness qualities predominate.

The Use Alternative recommends only those Wilderness Study Areas with impeccable wilderness qualities; most of them are pristine, highly scenic mountainous areas with no evidence of man's works. The total area amounts to about 602,000 acres. The average size of an individual Wilderness Study Area in this alternative is 50,000 to 100,000 acres.

In summary, the three action alternative plans offer a range of wilderness and natural resource protection, as well as a broad scope of opportunities for resource use and development, as illustrated in Table W-2.

Table W-2

COMPARATIVE ANALYSIS OF THE ALTERNATIVES

	Protection Alternative			Balanced Alternative			Use Alternative		
	Acres (000,000)	Percent of Public Lands[a]	Percent of CDCA[b]	Acres (000,000)	Percent of Public Lands[a]	Percent of CDCA[b]	Acres (000,000)	Percent of Public Lands[a]	Percent of CDCA[b]
Wilderness Study Areas (WSA)	5.7	47	22	5.7	47	22	5.7	47	22
Areas Recommended as Suitable[c]	5.2	43	20	1.8	15	7	.6	5	2
Areas Recommended as Nonsuitable	.5	4	2	3.9	32	15	5.1	42	20

[a] There are 12.1 million acres of BLM-managed lands within the CDCA.

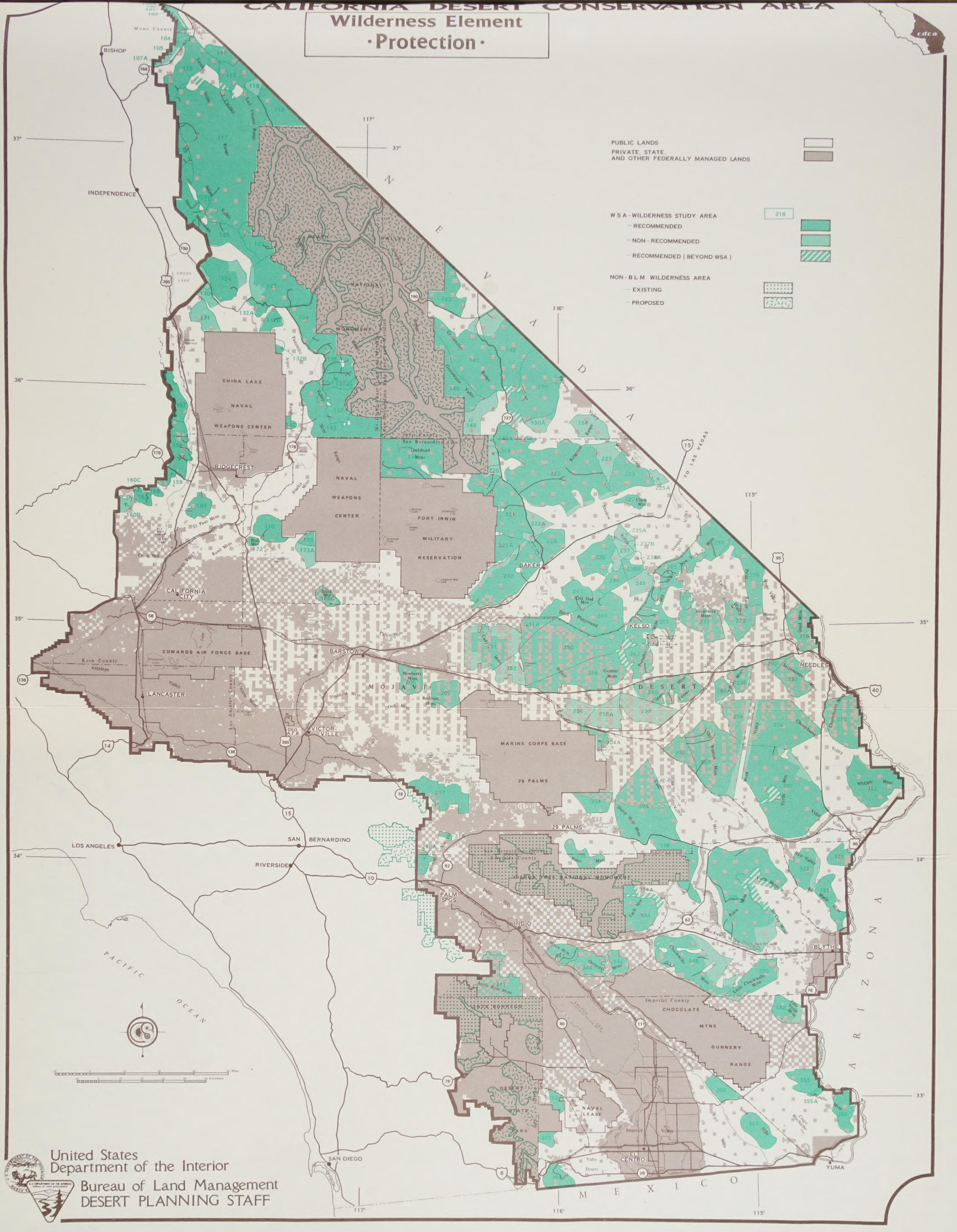
[b] There are 25.6 million acres in the entire CDCA.

[c] There are 2,630,000 acres of wilderness designated or administratively approved within the CDCA on lands managed by the National Park Service or the State of California. These wilderness areas represent 10% of the CDCA.

CALIFORNIA DESERT CONSERVATION AREA

Wilderness Element

·Protection·


cdca
PUBLIC LANDS
PRIVATE, STATE, AND OTHER FEDERALLY MANAGED LANDS
WSA - WILDERNESS STUDY AREA
218
RECOMMENDED
NON - RECOMMENDED
RECOMMENDED (BEYOND WSA)
NON - BLM WILDERNESS AREA
EXISTING
PROPOSED
BISHOP
INDEPENDENCE
RIDGECREST
CHINA LAKE NAVAL WEAPONS CENTER
NAVAL WEAPONS CENTER
FORT IRWIN MILITARY RESERVATION
DEATH VALLEY NATIONAL MONUMENT
CALIFORNIA CITY
EDWARDS AIR FORCE BASE
LANCASTER
BARSTOW
VICTORVILLE
BAKER
KELSO
NEEDLES
MOJAVE DESERT
MARINE CORPS BASE 29 PALMS
29 PALMS
JOSHUA TREE NATIONAL MONUMENT
SAN BERNARDINO
LOS ANGELES
RIVERSIDE
PALM SPGS
INDIO
BLYTHE
ANZA BORREGO DESERT STATE PARK
CHOCOLATE MTNS GUNNERY RANGE
NAVAL LEASE
EL CENTRO
SAN DIEGO
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PACIFIC OCEAN
NEVADA
ARIZONA
MEXICO
TO LAS VEGAS
37°
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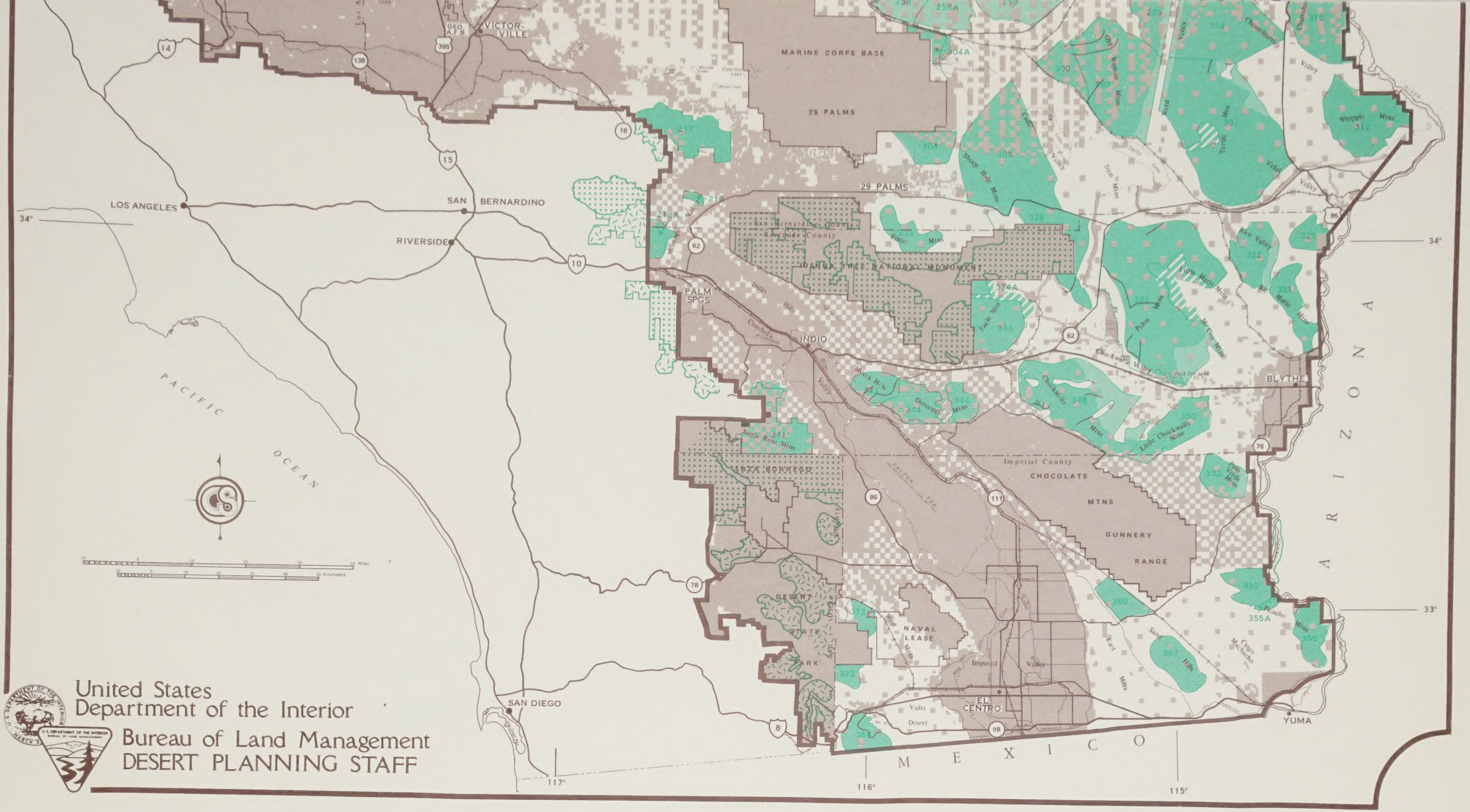

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JOSHUA TREE NATIONAL MONUMENT
San Bernardino County
Riverside County
Imperial County
CHOCOLATE MTNS GUNNERY RANGE
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ANZA BORREGO DESERT STATE PARK
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EL CENTRO
SAN DIEGO
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Turtle Mtn
Old Woman Mtns
Sheep Hole Mtns
Pinto Mtns
Eagle Mtn
Little Maria Mtns
Big Maria Mtns
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McCoy Mtns
Chuckwalla Mtns
Little Chuckwalla Mtns
Orocopia Mtns
Mecca Hills
Santa Rosa Mtns
Palo Verde Mtns
Picacho Mtns
Cargo Muchacho
Sand Hills
East Mesa
West Mesa
Imperial Valley
Yuha Desert
Chuckwalla Valley
Coachella Valley
Indio Hills
Rice Valley
Vidal Valley
Ward Valley
Cadiz Valley
Iron Mtns
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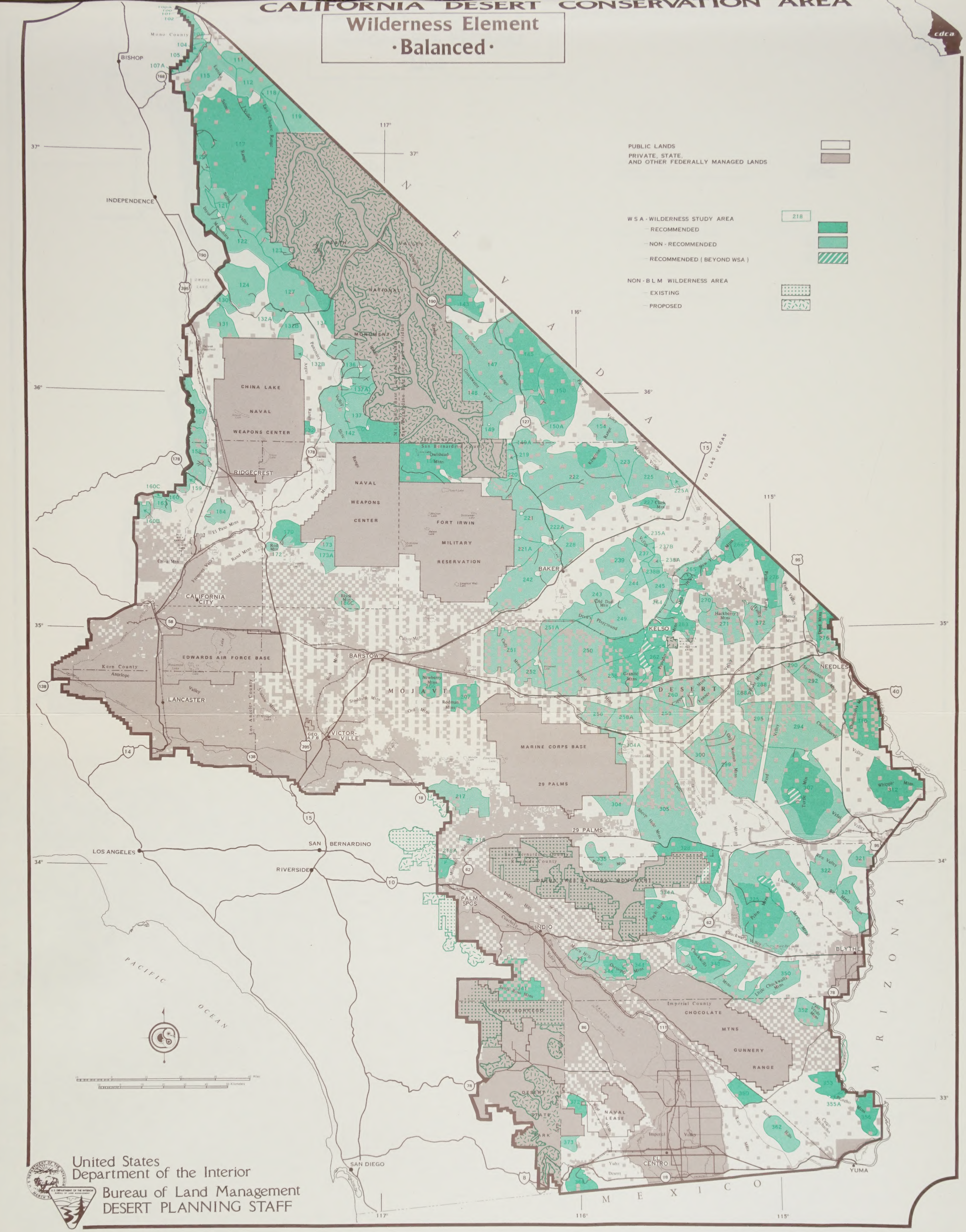
CALIFORNIA DESERT CONSERVATION AREA

Wilderness Element
·Balanced·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JOSHUA TREE NATIONAL MONUMENT
ANZA BORREGO DESERT STATE PARK
MOJAVE DESERT
NEVADA
ARIZONA
MEXICO
PACIFIC OCEAN
Kern County
Los Angeles County
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San Bernardino County
Riverside County
Imperial County
Mono County
TO LAS VEGAS
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PUBLIC LANDS ☐

PRIVATE, STATE, AND OTHER FEDERALLY MANAGED LANDS ▨

W S A - WILDERNESS STUDY AREA 218
- RECOMMENDED 🟩
- NON - RECOMMENDED 🟩
- RECOMMENDED (BEYOND WSA) ▨

NON - B L M WILDERNESS AREA
- EXISTING ▨
- PROPOSED ▨

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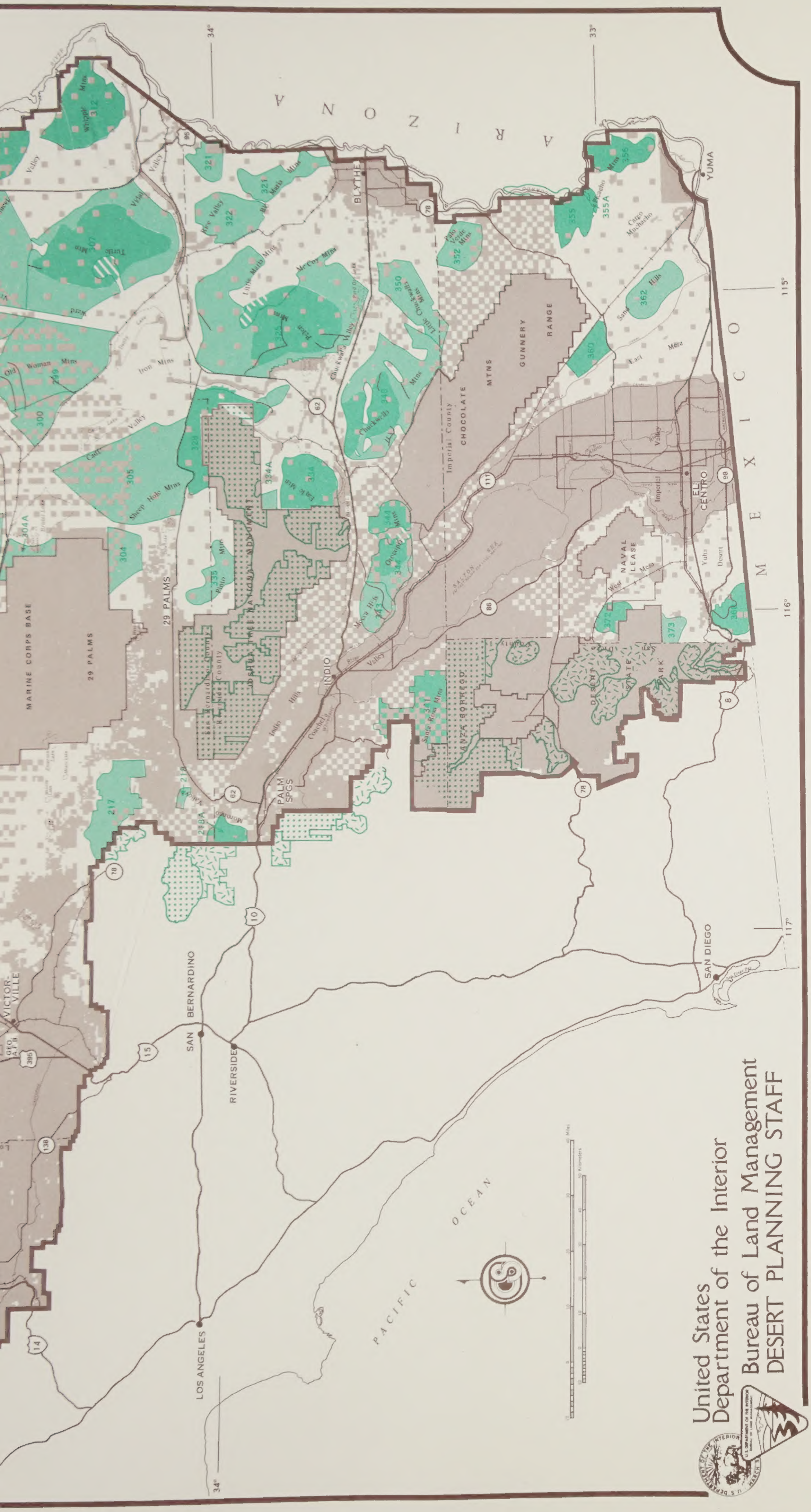
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SAN DIEGO
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CHOCOLATE MTNS GUNNERY RANGE
NAVAL LEASE
ANZA BORREGO DESERT STATE PARK
JOSHUA TREE NATIONAL MONUMENT
Imperial County
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Imperial Valley
Coachella Valley
Yuha Desert
East Mesa
West Mesa
Chuckwalla Mtns
Orocopia Mtns
Turtle Mtns
Whipple Mtns
Old Woman Mtns
Sheep Hole Mtns
Iron Mtns
Palen Mtns
McCoy Mtns
Little Maria Mtns
Big Maria Mtns
Palo Verde Mtns
Cargo Muchacho
Santa Rosa Mtns
Pinto Mtns
Eagle Mtns
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Indio Hills
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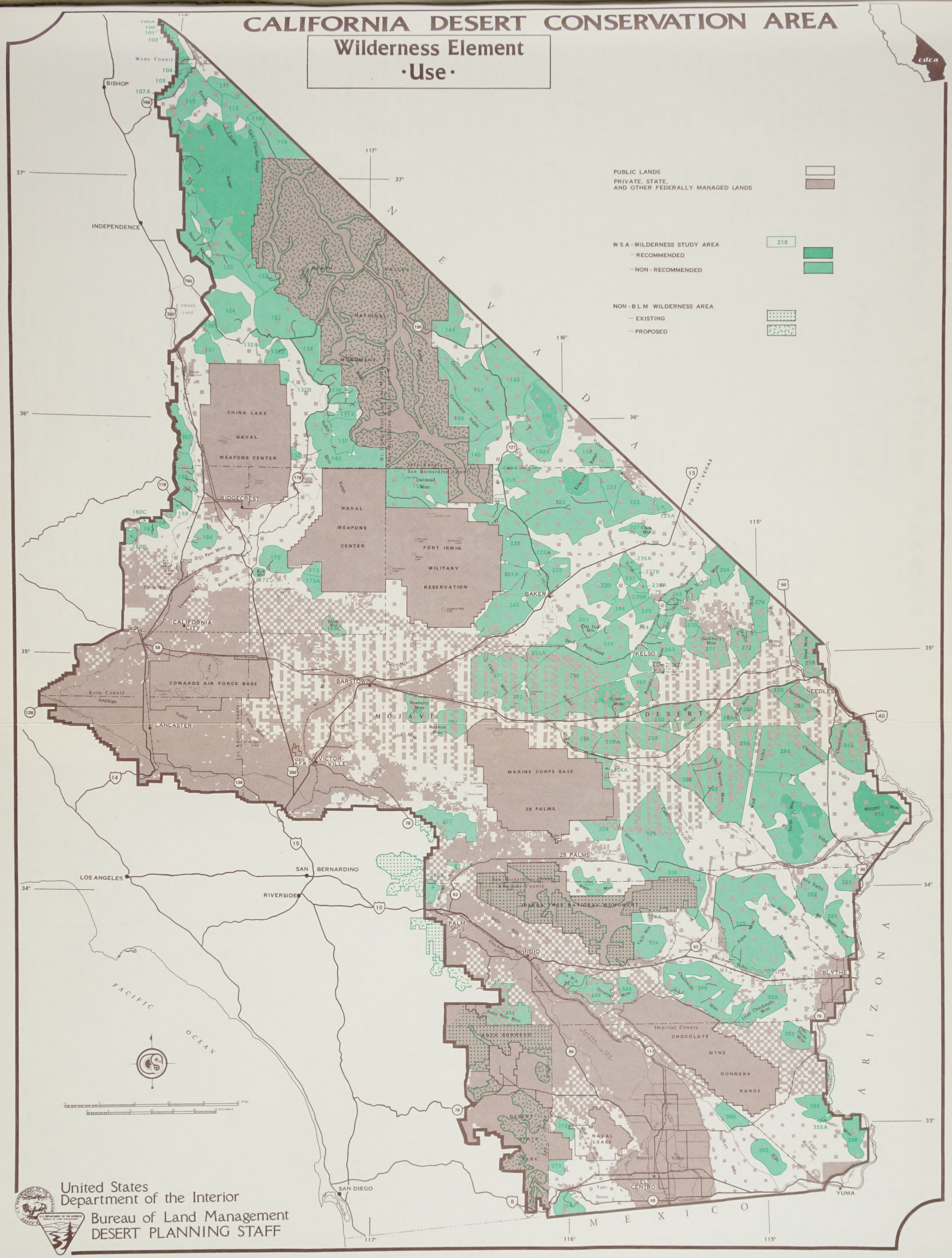
CALIFORNIA DESERT CONSERVATION AREA

Wilderness Element
·Use·


cdca
PUBLIC LANDS
PRIVATE, STATE, AND OTHER FEDERALLY MANAGED LANDS
W S A - WILDERNESS STUDY AREA 218
— RECOMMENDED
— NON - RECOMMENDED
NON - B L M WILDERNESS AREA
— EXISTING
— PROPOSED
BISHOP
INDEPENDENCE
RIDGECREST
CALIFORNIA CITY
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BARSTOW
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United States
Department of the Interior
Bureau of Land Management
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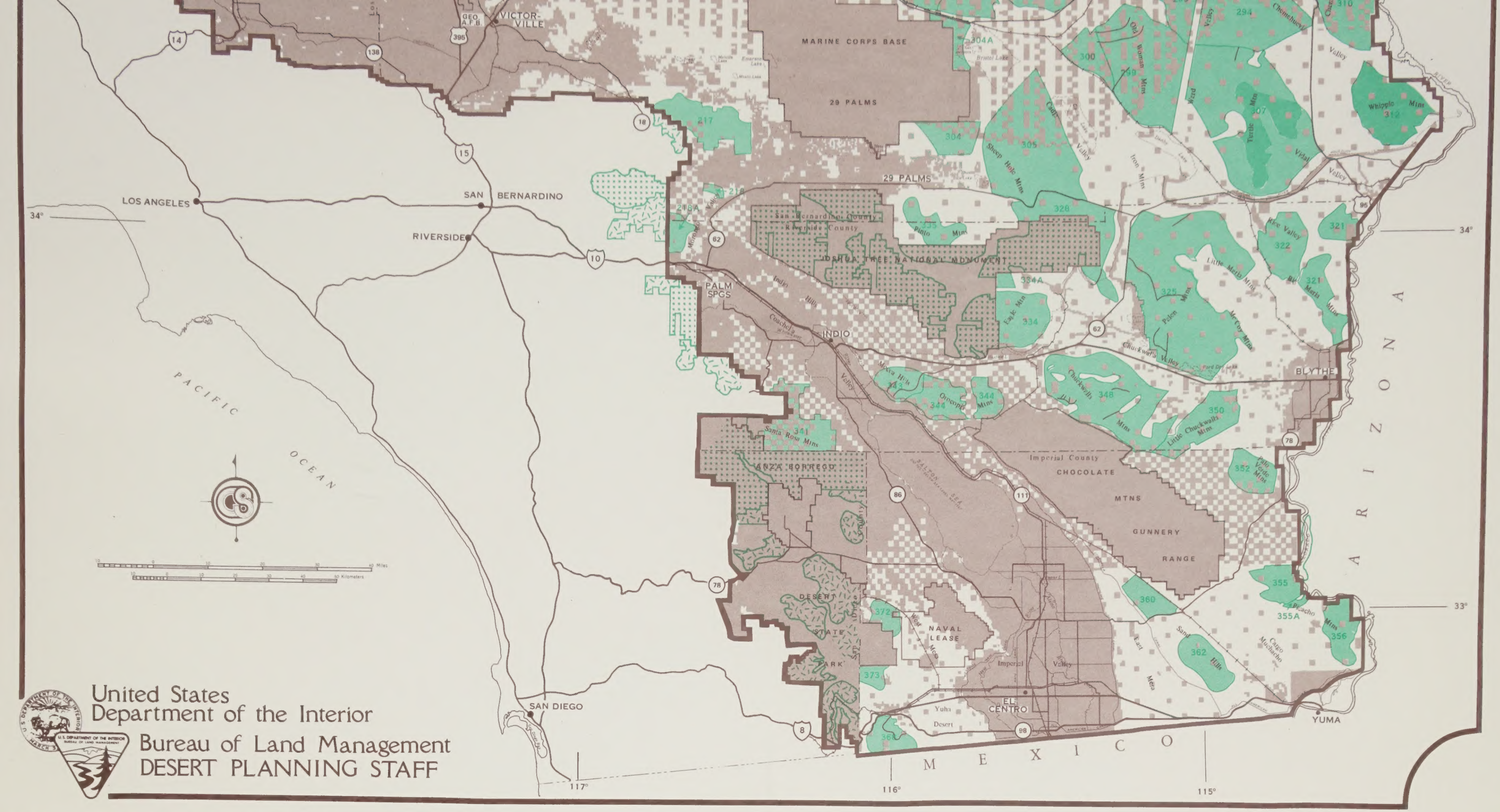
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C-4
Motorized Vehicle Access

BACKGROUND and ISSUES

Motorized vehicle use in the desert constitutes one of the most strongly contested and debated desert uses. While the recent phenomenal growth in recreational vehicle use is a major factor in this debate, the use of motorized vehicles is important for many other desert uses. The goal of management is to obtain a judicious balance between the impacts of motorized vehicle use on the desert environment and the access requirements of individuals and groups within the California desert. The Motorized Vehicle Element outlines and displays the relative accessibility of California desert lands for motorized vehicle use under each of the four plan alternatives.

The issue is clearly drawn between those who would limit access and those who want more. Conservationists and others who favor a reduction perceive the desert environment as being destroyed both directly by the vehicle itself and indirectly through increased access to sensitive remote areas which cannot sustain heavy recreation use. Proponents of more access argue that it is the essential ingredient to the use and full enjoyment of the desert. The opportunity to travel cross-country, challenge rugged terrain, and visit remote areas is unique to this region and must be preserved. They further hold that social benefits to individuals and families far outweigh damage to the desert environment.

By the conservative estimate of one study, the California Desert Conservation Area includes about 15,000 miles of paved and maintained roads, 21,000 miles of unmaintained dirt roads, and 7,000 miles of washes large enough to accommodate vehicles. Using these conservative figures, it has been determined that 50 percent of the California Desert Conservation Area is within one mile of a road or way, and 95 percent is within three miles of a road or way, making the CDCA one of the most accessible deserts of its size anywhere in the world.

This element directs and controls motorized vehicle use by four designations consistent with the four multiple use classes of the California Desert Plan. These designations are related to those of the 1973 Interim Critical Management Program for Vehicle Use in the California Desert (ICMP):

- Open Areas--Vehicle use is allowed anywhere in the area if the vehicle is operated responsibly in accordance with regulations;
- Closed Areas--Motorized vehicle use is prohibited;
- Existing Roads and Ways--Motorized vehicle use is permitted on all routes established before December 31, 1977.
- Designated Roads and Ways--Motorized vehicle travel is permitted only on roads and ways designated by the BLM.

For purposes of this plan, a road is defined as an existing vehicle route which has been improved and maintained by mechanical means to insure relatively regular and continuous use. A way maintained solely by the passage of vehicles does not constitute a road.

A way is defined as an existing vehicle route which does not necessarily show evidence of mechanical maintenance to insure relatively regular and continuous use, but which does show significant evidence of surface usage resulting from prior vehicle travel. "Significant evidence" means predominately devoid of vegetation compared to areas immediately adjacent to the route, so that a track is clearly discernable. Where no appreciable vegetation is present, significant soil disturbances or changes from adjacent ground levels (e.g., wheel ruts) are visible.

If existing roads or ways are not wide enough to accommodate vehicular passage without significant vegetative or soil disruption through expansion of the route, further passage of such vehicles is not allowed.

If weather obliterates evidence of the route, this does not exclude vehicle use on the affected portion of the route, if the alignment of the route is obvious, marked, or designated as open to vehicular travel.

All "existing roads and ways" are those routes recorded as being in existence on or prior to December 31, 1977. "Recorded" is defined as being recognizable on aerial photographs, maps, and records available to the BLM during Desert Plan preparation.

If not otherwise prohibited by State or local laws or BLM regulations, desert users may stop alongside roads or ways for camping, picnicking, sightseeing, rockhounding, and other purposes. Such stopping and parking of vehicles is limited to 1-1/2 vehicle widths on either side of existing roads and ways. Drivers of such vehicles must allow adequate space for the safe clearance of other vehicles along the road or way. When locally sensitive resources have been identified, off-road or off-way parking may be limited to designated areas in classes L, M, and I, or in appropriate ACECs.

Exceptions to these parking limitations may be made for organized gatherings upon approval of a Temporary Use Permit (TUP) by the BLM.

Major sand dunes, dry lake beds, and washes which have opportunities for vehicle recreation will be designated as either open or closed areas for vehicle use, regardless of the multiple use classification for the area in which they occur. Sand dunes, dry lake beds, and washes not specifically designated as open or closed will be considered open to motorized vehicle use if they occur within open areas and existing road and way zones, and closed to motorized vehicle use within closed areas and designated road and way zones. This element also identifies those Class I areas which are open to off-road vehicle use.

The access designated in the Motorized Vehicle Element of each alternative responds to the overall objectives of that alternative. Designations will provide access for recreational activities, mineral exploration and extraction activities, energy development and transmission, education, and research. The provisions for maintenance of agricultural and livestock grazing operations, and other uses are discussed in the guidelines for the multiple use classes.

For a complete treatment of recreation vehicle use, including vehicle free play and competitive events, see the Recreation Element.

IMPLEMENTATION ASSUMPTIONS

❶ The designation of all open, closed, and existing roads and ways areas will become effective upon adoption of this plan.

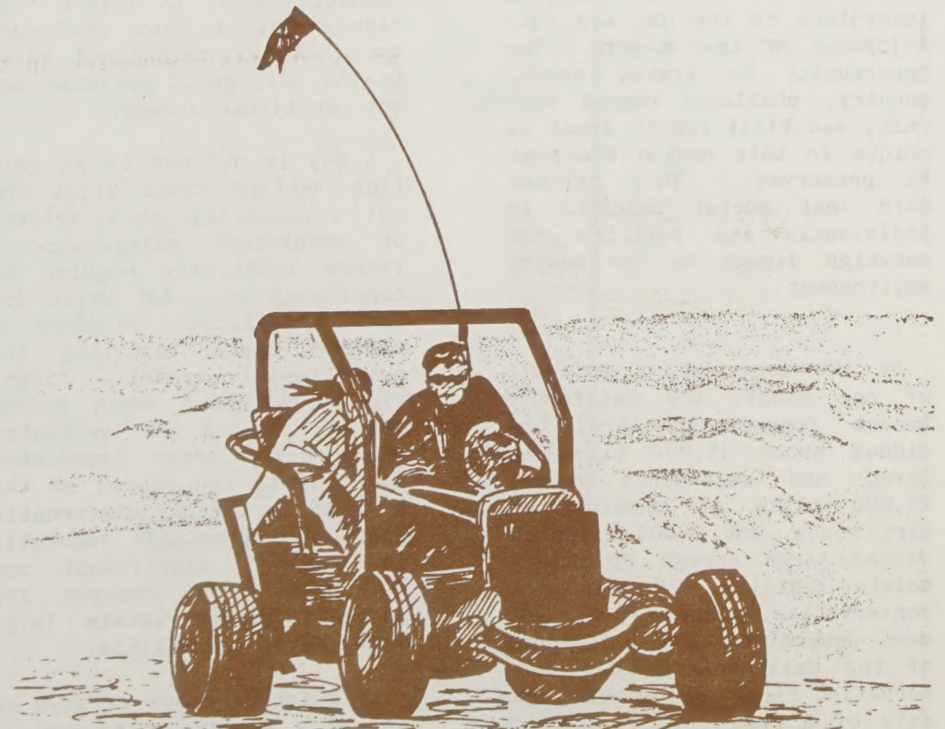
❷ Within Class L areas, the designation of roads and ways will be completed within seven years following adoption of this plan. While the designation process is underway, portions of Class L lands awaiting designation of roads open to use will be treated as existing road and way vehicle use areas.

❸ Within ACECs, the designation of roads and ways, including necessary on-the-ground measures such as sign posting, will be completed within two years following adoption of this plan.

❹ By October 1987, the Motorized Vehicle Element of the California Desert Plan will be modified to conform to C 43 CFR Part 8340 (dated July 16, 1979), "Off-Road Vehicle Use of Public Lands", as set forth in regulations (Circular # 2445). The new regulations provide for greater flexibility in the management of vehicles, including number and type of vehicles allowed and date and time of use.

MONITORING

Motorized vehicle use will be closely monitored for impacts to such resources as soils, biological resources, air quality, and cultural values. Monitoring standards and procedures will be established as an important part of the implementation program.



MOTORIZED VEHICLE ACCESS

Plan Alternatives

● NO ACTION ALTERNATIVE ●

Relationship to Issues

Under the No Action Alternative motorized vehicle use will continue to be managed in accordance with the Interim Critical Management Plan (ICMP), as amended. This includes the designation of areas which are open or closed to motorized vehicle use, and areas where use is limited to designated or existing roads and trails.

The ICMP is opposed by many dune buggy, four-wheel drive vehicle, and motorcycle enthusiasts and mineral interests who view the program as an effective closure of the desert, restricting free movement to a few open areas. Many favoring strong protection and conservation measures believe not only that the ICMP is difficult to enforce but also that it leaves the desert far too vulnerable to the destruction of natural and cultural values.

Objective

To continue control of motorized vehicle use on an interim basis for the protection of vulnerable resources values until a comprehensive desert plan is completed.

Element Components

It must be recognized that prior to adoption of the ICMP all of the desert under BLM management was open to vehicle use. The plan reduced the amount of area legally available to unrestrained use from 100 percent to 5.2 percent. Existing roads and trails motorized vehicle access is available on 61.8 percent of public lands, designated roads and trails access on 28 percent, and no motorized vehicle access on 5 percent. (See the No Action Motorized Vehicle Element Map and Table MV-1 for statistical comparisons).

● PROTECTION ALTERNATIVE ●

Relationship to Issues

The ICMP fails to adequately protect natural values from the impact of motorized vehicles, according to those favoring a more protective resource management philosophy. They favor the resolution of this issue by strong management actions such as substantial reduction in the size and number of open areas and restriction of vehicle travel to designated roads. This alternative is designed to respond to this perspective.

> "Open, random use areas cannot be supported in the desert. Open areas are expanding by de facto use."

Objective

Limit motorized vehicle travel to the extent necessary to fully protect sensitive natural and cultural resource values.

Element Components

Access is controlled by a dominant desert pattern of designated roads and trails and closed areas with "cherry stem" access (i.e., generally short, dead-end roads and ways which penetrate the area). The pursuit of valid uses in this alternative places emphasis on foot access. Only a portion of the total demand for organized competitive events and vehicle free play is accommodated. This alternative provides six open areas comprising less than 1 percent of the BLM-managed area. These areas must provide for off-road motorized free play and pit areas for the start and finish of competitive events. Two dune systems are open for motorized vehicle use. A minimal five percent of the area remains in existing roads and ways. About 43.6 percent of the area is closed to vehicles and the remaining 48.4 percent is designated roads and ways. (See the Protection Motorized Vehicle Element Map and Table MV-1 for statistical comparisons.)

● BALANCED ALTERNATIVE ●

Relationship to Issues

The Balanced Alternative attempts to protect sensitive resources and accommodate motorized vehicle use in its many forms. To achieve this end, tradeoffs between the fullest protection of sensitive resources and motorized vehicle use were made, with measures favoring either activity depending on the nature and condition of the resource.

> "O R V users are primarily family oriented and want reasonable regulations. It's a big desert and there's enough room for all of us."

Objective

To control and direct motorized vehicle access in order to achieve a desertwide balance between sensitive resources protection and vehicle use.

Element Components

The Balanced Alternative prohibits motorized vehicles in wilderness and highly sensitive resource areas, 15.8 percent of the desert area managed by BLM in this alternative. Protection of natural, scenic and cultural values is achieved through the careful selection and designation of roads and ways (42.7 percent) consistent with the intent and purpose of the Multiple Use Class L. Opportunities for the motorcycle, dune buggy, and four-wheel drive vehicle recreationist to experience variety of terrain and challenge is provided within thirteen open areas, consitituting about 2.4 percent of public lands, and which are relatively convenient to major urban cities of southern California. Three of these open areas are dune systems. About 36.7 percent of the desert permits vehicles on existing roads and ways (see the Balanced Motorized Vehicle Element Map and Table MV-1 for statistical comparisons).

● USE ALTERNATIVE ●

Relationship to Issues

Contending that vehicle access is essential for the use and enjoyment of the desert, a large segment of the public favors management with limited restriction on motorized vehicle activity. Those engaged in important commercial ventures, such as mineral exploration, highly value the freedom to range widely, as do advocates of some forms of recreation. From this perspective, many believe the protection of sensitive resources should be achieved not by the restriction of access, but rather through educating the public in proper conduct when recreating on the desert.

> "It appears that the BLM will not be happy until they regulate the demise of the entire sport of off road use."

Objective

To provide motorized vehicle access to the fullest possible extent for use and enjoyment by the public, in keeping with laws and policies protecting resource values.

Element Components

This alternative provides the greatest degree of motorized vehicle access throughout the desert. About 10.8 percent of BLM-managed lands are designated in twenty open areas, including four dune systems. Motorized vehicle access on existing roads and ways predominates, with 64.7 percent of BLM-administered lands. Designated roads and trails access is allowed on 16.4 percent of these lands, and 5.6 percent is closed to motorized vehicle use.

● COMPARATIVE ANALYSIS ● OF ALTERNATIVES

A comparison of action alternative plan proposals with the ICMP, or No Action Alternative, reveals that the total percentage of open areas in the Protection and the Balanced alternatives would be reduced from a current 5.2 percent to 0.8 percent and 2.4 percent, respectively. In the Use Alternative, the percentage of open area would increase to 10.8 percent, more than doubling the current availability.

The present 61.8 percent existing roads and ways access would slightly increase to 64.7 percent in the Use Alternative, and diminish considerably under the Protection Alternative, to 5 percent.

The ICMP classifies 28 percent of BLM-managed desert lands as available on designated roads and ways. While the Balanced Alternative adds about 14.7 percent to this total, the Use Alternative would reduce this designation to 16.4 percent. This high degree of control is widespread in the Protection Alternative, with 48.4 percent in this designation.

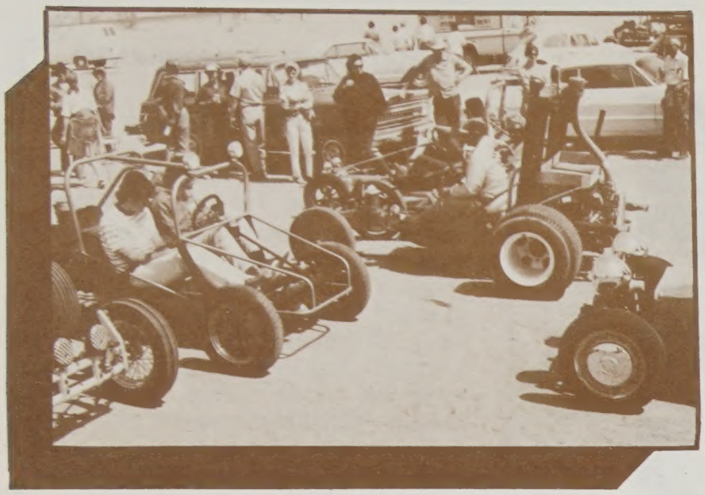
Five percent of the desert is closed to vehicle use in the ICMP, very close to the Use Alternative's 5.6 percent. Three times this amount, 15.8 percent, would be closed in the Balanced Alternative, and vehicles would be prohibited in 43.6 percent of BLM-managed lands in the Protection Alternative.

Table MV-1

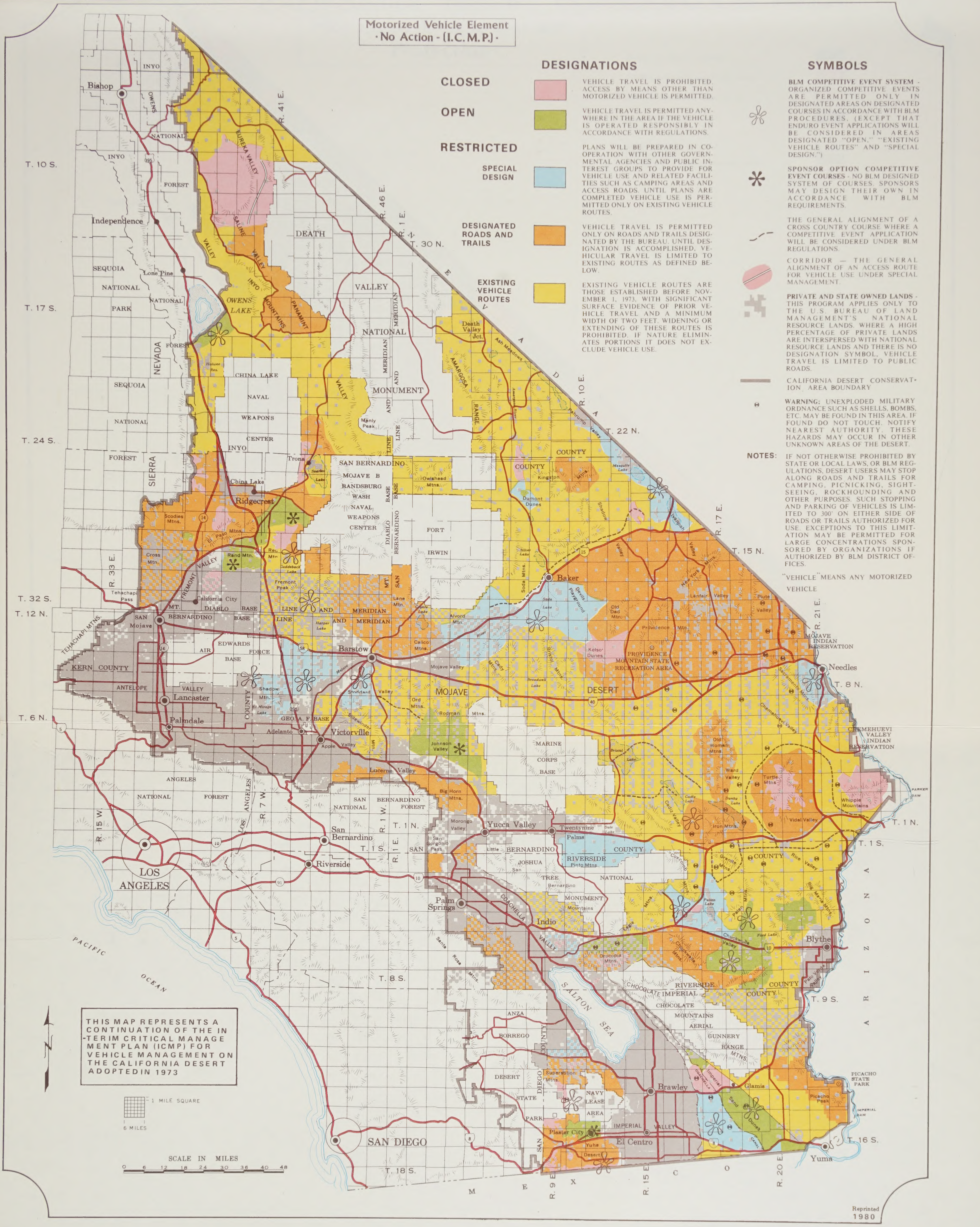
COMPARISON OF MOTORIZED VEHICLE ACCESS BY PLAN ALTERNATIVE

	Acres (000)				Percent			
Designation	No Action Alternative	Protection Alternative	Balanced Alternative	Use Alternative	No Action Alternative	Protection Alternative	Balanced Alternative	Use Alternative
Open	628	93	289	1,306	5.2	.8	2.4	10.8
Existing Roads and Ways	7,496	600	4,457	7,852	61.8	5.0	36.7	64.7
Designated Roads and Ways	3,402	5,880	5,174	1,991	28.0	48.4	42.7	16.4
Closed	605	5,284	1,914	679	5.0	43.6	15.8	5.6
Interim Existing Roads and Ways[a]		274	296	303		2.2	2.4	2.5
Totals	12,131	12,131	12,131	12,131	100	100	100	100

[a] BLM-administered lands identified for potential disposal. Interim vehicle designation will be existing roads and trails.



Motorized Vehicle Element
· No Action - (I.C.M.P.) ·



INYO
Bishop
OWENS
NATIONAL
FOREST
Independence
SEQUOIA
NATIONAL
PARK
Lone Pine
OWENS LAKE
INYO MOUNTAINS
PANAMINT
EUREKA VALLEY
SALINE VALLEY
DEATH VALLEY NATIONAL MONUMENT
Death Valley Jct.
Ash Meadows
AMARGOSA RANGE
Amargosa River
Pahrump Valley
NEVADA
SIERRA
SEQUOIA NATIONAL FOREST
CHINA LAKE NAVAL WEAPONS CENTER
Haiwee Res.
Manly Peak
Trona
Searles Lake
China Lake
Ridgecrest
Scodies Mtns.
El Paso Mtns.
Cross Mtn.
Rand Mtn.
Red Mtn.
Cuddeback Lake
Fremont Valley
Fremont Peak
SAN BERNARDINO
MOJAVE B
RANDSBURG WASH
NAVAL WEAPONS CENTER
Owlshead Mtns.
FORT IRWIN
Lane Mtn.
Harper Lake
Tehachapi Pass
TEHACHAPI MTNS.
California City
MT. DIABLO BASE LINE AND MERIDIAN
SAN BERNARDINO BASE LINE AND MERIDIAN
Mojave
KERN COUNTY
EDWARDS AIR FORCE BASE
ANTELOPE VALLEY
Lancaster
Palmdale
Shadow Mtn.
El Mirage Lake
GEO. A. F. BASE
Adelanto
Victorville
Apple Valley
Barstow
Calico Mtns.
Alvord Mtn.
Mojave River
Stoddard Valley
Sidewinder Mtn.
Ord Mtns.
Rodman Mtns.
MOJAVE DESERT
Johnson Valley
Lucerne Valley
Big Horn Mtns.
MARINE CORPS BASE
COUNTY
Kingston Mtns.
Mesquite Lake
Dumont Dunes
Shadow Valley
Silver Lake
Soda Mtns.
Baker
Devils Playground
Soda Lake
Kelso Dunes
Old Dad Mtn.
Providence Mtn.
PROVIDENCE MOUNTAIN STATE RECREATION AREA
Lanfair Valley
New York Mtns.
Ivanpah Valley
Piute Valley
Cady Mtns.
Bristol Mtns.
Broadwell Lake
Bristol Lake
MOJAVE INDIAN RESERVATION
Needles
Sacramento Mtns.
Chemehuevi Valley
CHEMEHUEVI VALLEY INDIAN RESERVATION
Old Woman Mtns.
Ward Valley
Turtle Mtns.
Whipple Mountains
PARKER DAM
Cadiz Lake
Danby Lake
Cadiz Valley
Iron Mtns.
Vidal Valley
Granite Mtns.
Rice Valley
RIVERSIDE COUNTY
Coxcomb Mtns.
Palen Lake
Palen Mtns.
Big Maria Mtns.
Ford Lake
Chuckwalla Valley
Blythe
Palo Verde Valley
Chuckwalla Mtns.
Orocopia Mtns.
Eagle Mtns.
SAN BERNARDINO NATIONAL FOREST
Morongo Valley
Yucca Valley
Twentynine Palms
Dale Lake
San Gorgonio Pass
Little San Bernardino
Pinto Mtns.
JOSHUA TREE NATIONAL MONUMENT
Palm Springs
COACHELLA VALLEY
Indio
Santa Rosa Mtns.
SALTON SEA
CHOCOLATE MOUNTAINS AERIAL GUNNERY RANGE
IMPERIAL COUNTY
ANZA BORREGO DESERT STATE PARK
SAN DIEGO COUNTY
Superstition Mtns.
NAVY LEASE AREA
Imperial Sand Dunes
Brawley
Glamis
Picacho Peak
PICACHO STATE PARK
IMPERIAL DAM
Plaster City
Yuha Desert
El Centro
IMPERIAL VALLEY
All American Canal
Yuma
ANGELES NATIONAL FOREST
LOS ANGELES
San Bernardino
Riverside
SAN DIEGO
PACIFIC OCEAN
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A R I Z O N A
N E V A D A
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T. 17 S.
T. 24 S.
T. 32 S.
T. 12 N.
T. 6 N.
T. 1 N.
T. 1 S.
T. 8 S.
T. 9 S.
T. 16 S.
T. 18 S.
T. 8 N.
T. 15 N.
T. 22 N.
T. 30 N.
R. 41 E.
R. 46 E.
R. 1 E.
R. 10 E.
R. 17 E.
R. 21 E.
R. 33 E.
R. 15 W.
R. 7 W.
R. 1 W.
R. 9 E.
R. 15 E.
R. 20 E.
1 MILE SQUARE
6 MILES
SCALE IN MILES
0 6 12 18 24 30 36 42 48
N

DESIGNATIONS

CLOSED	🟥	VEHICLE TRAVEL IS PROHIBITED. ACCESS BY MEANS OTHER THAN MOTORIZED VEHICLE IS PERMITTED.
OPEN	🟩	VEHICLE TRAVEL IS PERMITTED ANYWHERE IN THE AREA IF THE VEHICLE IS OPERATED RESPONSIBLY IN ACCORDANCE WITH REGULATIONS.
RESTRICTED		PLANS WILL BE PREPARED IN COOPERATION WITH OTHER GOVERNMENTAL AGENCIES AND PUBLIC INTEREST GROUPS TO PROVIDE FOR VEHICLE USE AND RELATED FACILITIES SUCH AS CAMPING AREAS AND ACCESS ROADS. UNTIL PLANS ARE COMPLETED VEHICLE USE IS PERMITTED ONLY ON EXISTING VEHICLE ROUTES.
SPECIAL DESIGN	🟦	
DESIGNATED ROADS AND TRAILS	🟧	VEHICLE TRAVEL IS PERMITTED ONLY ON ROADS AND TRAILS DESIGNATED BY THE BUREAU. UNTIL DESIGNATION IS ACCOMPLISHED, VEHICULAR TRAVEL IS LIMITED TO EXISTING ROUTES AS DEFINED BELOW.
EXISTING VEHICLE ROUTES	🟨	EXISTING VEHICLE ROUTES ARE THOSE ESTABLISHED BEFORE NOVEMBER 1, 1973, WITH SIGNIFICANT SURFACE EVIDENCE OF PRIOR VEHICLE TRAVEL AND A MINIMUM WIDTH OF TWO FEET. WIDENING OR EXTENDING OF THESE ROUTES IS PROHIBITED. IF NATURE ELIMINATES PORTIONS IT DOES NOT EXCLUDE VEHICLE USE.

SYMBOLS

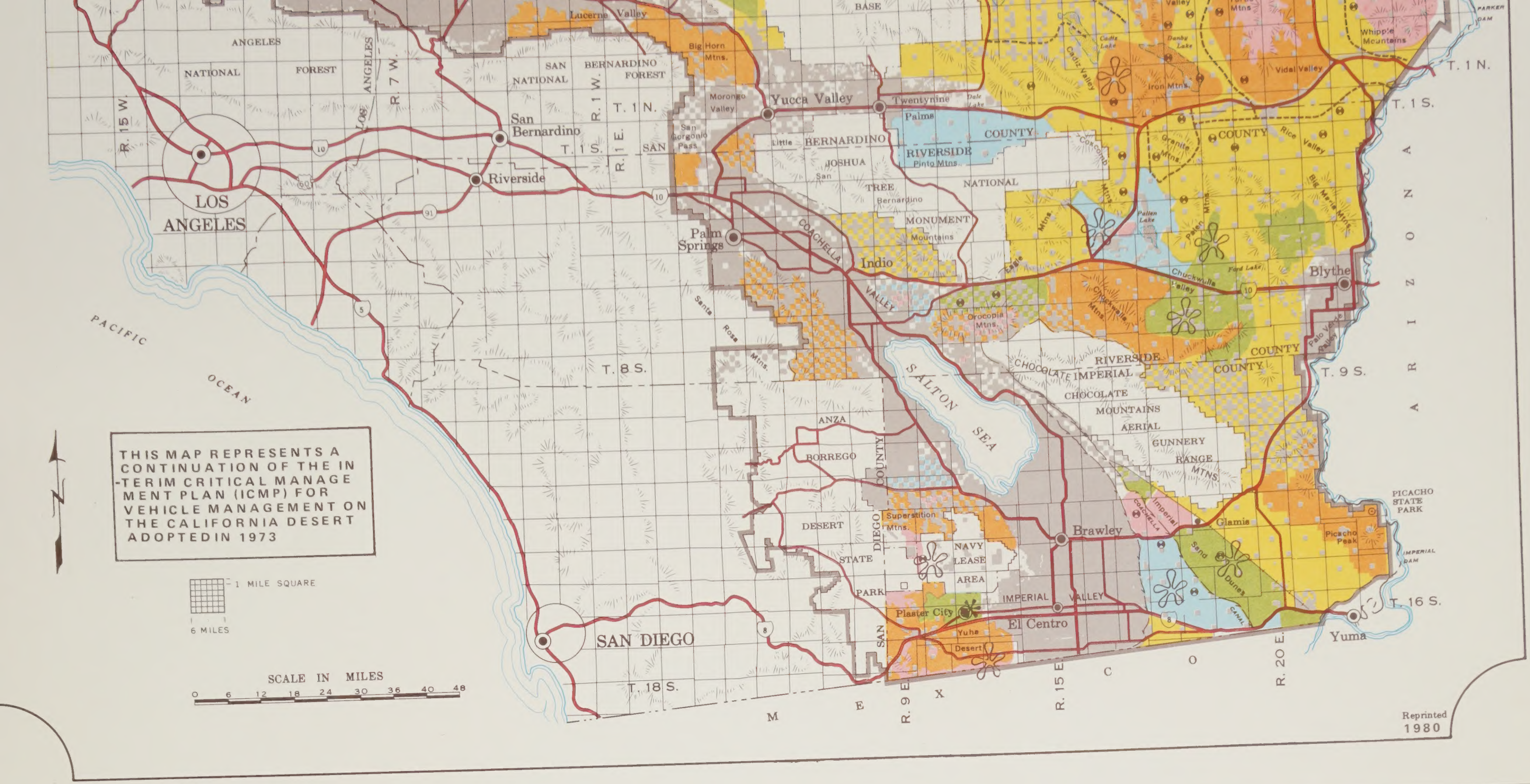
✿	**BLM COMPETITIVE EVENT SYSTEM** - ORGANIZED COMPETITIVE EVENTS ARE PERMITTED ONLY IN DESIGNATED AREAS ON DESIGNATED COURSES IN ACCORDANCE WITH BLM PROCEDURES. (EXCEPT THAT ENDURO EVENT APPLICATIONS WILL BE CONSIDERED IN AREAS DESIGNATED "OPEN," "EXISTING VEHICLE ROUTES" AND "SPECIAL DESIGN.")
*	**SPONSOR OPTION COMPETITIVE EVENT COURSES** - NO BLM DESIGNED SYSTEM OF COURSES. SPONSORS MAY DESIGN THEIR OWN IN ACCORDANCE WITH BLM REQUIREMENTS.
- -	THE GENERAL ALIGNMENT OF A CROSS COUNTRY COURSE WHERE A COMPETITIVE EVENT APPLICATION WILL BE CONSIDERED UNDER BLM REGULATIONS.
⬬	CORRIDOR — THE GENERAL ALIGNMENT OF AN ACCESS ROUTE FOR VEHICLE USE UNDER SPECIAL MANAGEMENT.
▨	**PRIVATE AND STATE OWNED LANDS** - THIS PROGRAM APPLIES ONLY TO THE U.S. BUREAU OF LAND MANAGEMENT'S NATIONAL RESOURCE LANDS. WHERE A HIGH PERCENTAGE OF PRIVATE LANDS ARE INTERSPERSED WITH NATIONAL RESOURCE LANDS AND THERE IS NO DESIGNATION SYMBOL, VEHICLE TRAVEL IS LIMITED TO PUBLIC ROADS.
▬	CALIFORNIA DESERT CONSERVATION AREA BOUNDARY
⊖	**WARNING:** UNEXPLODED MILITARY ORDNANCE SUCH AS SHELLS, BOMBS, ETC. MAY BE FOUND IN THIS AREA. IF FOUND DO NOT TOUCH. NOTIFY NEAREST AUTHORITY. THESE HAZARDS MAY OCCUR IN OTHER UNKNOWN AREAS OF THE DESERT.

NOTES: IF NOT OTHERWISE PROHIBITED BY STATE OR LOCAL LAWS, OR BLM REGULATIONS, DESERT USERS MAY STOP ALONG ROADS AND TRAILS FOR CAMPING, PICNICKING, SIGHTSEEING, ROCKHOUNDING AND OTHER PURPOSES. SUCH STOPPING AND PARKING OF VEHICLES IS LIMITED TO 300' ON EITHER SIDE OF ROADS OR TRAILS AUTHORIZED FOR USE. EXCEPTIONS TO THIS LIMITATION MAY BE PERMITTED FOR LARGE CONCENTRATIONS SPONSORED BY ORGANIZATIONS IF AUTHORIZED BY BLM DISTRICT OFFICES.

"VEHICLE" MEANS ANY MOTORIZED VEHICLE

THIS MAP REPRESENTS A CONTINUATION OF THE INTERIM CRITICAL MANAGEMENT PLAN (ICMP) FOR VEHICLE MANAGEMENT ON THE CALIFORNIA DESERT ADOPTEDIN 1973

Reprinted
1980


PARKER DAM
T. 1 N.
T. 1 S.
T. 9 S.
T. 16 S.
T. 8 S.
T. 18 S.
R. 15 W.
R. 7 W.
R. 1 W.
R. 1 E.
R. 9 E.
R. 15 E.
R. 20 E.
A R I Z O N A
M E X I C O
PACIFIC OCEAN
LOS ANGELES
ANGELES NATIONAL FOREST
LOS ANGELES
SAN BERNARDINO NATIONAL FOREST
San Bernardino
Riverside
SAN
BASE
Lucerne Valley
Big Horn Mtns.
Morongo Valley
San Gorgonio Pass
Yucca Valley
Twentynine Palms
Dale Lake
Little
BERNARDINO
RIVERSIDE
COUNTY
Pinto Mtns.
JOSHUA TREE NATIONAL MONUMENT
San Bernardino
Mountains
Palm Springs
COACHELLA VALLEY
Indio
Eagle
Santa Rosa Mtns.
Orocopia Mtns.
SALTON SEA
Chuckwalla Valley
Chuckwalla Mtns.
Ford Lake
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Cadiz Lake
Cadiz Valley
Danby Lake
Vidal Valley
Whipple Mountains
Rice Valley
Big Maria Mtns.
Blythe
Palo Verde Valley
RIVERSIDE COUNTY
IMPERIAL COUNTY
CHOCOLATE
CHOCOLATE MOUNTAINS AERIAL GUNNERY RANGE MTNS.
ANZA BORREGO DESERT STATE PARK
SAN DIEGO COUNTY
Superstition Mtns.
NAVY LEASE AREA
Brawley
Imperial
COACHELLA
Glamis
Sand Dunes
CANAL
IMPERIAL VALLEY
El Centro
Plaster City
Yuha Desert
PICACHO STATE PARK
Picacho Peak
IMPERIAL DAM
Yuma
SAN DIEGO
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91
60
5
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1 MILE SQUARE
6 MILES
SCALE IN MILES
0
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12
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48
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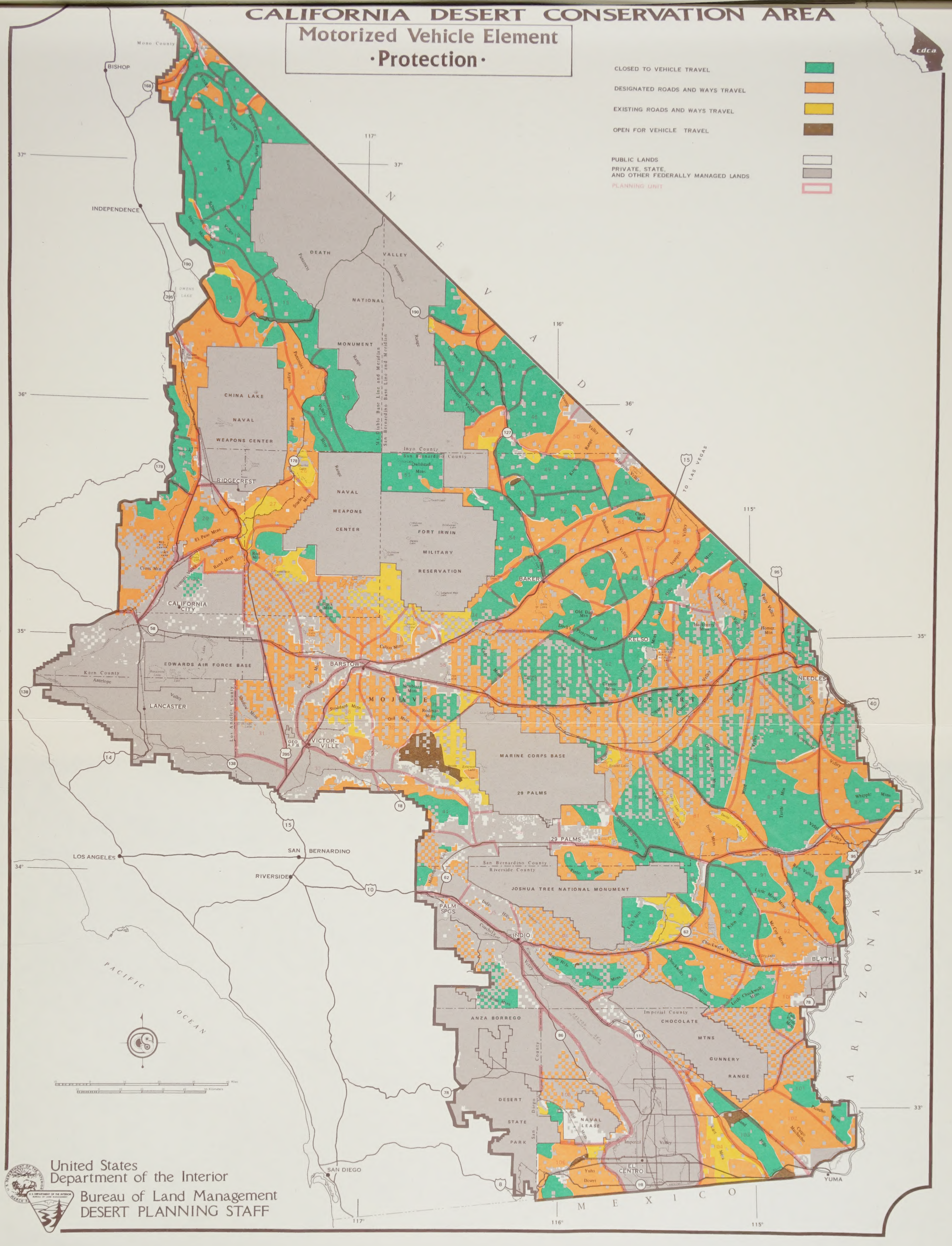
THIS MAP REPRESENTS A CONTINUATION OF THE INTERIM CRITICAL MANAGEMENT PLAN (ICMP) FOR VEHICLE MANAGEMENT ON THE CALIFORNIA DESERT ADOPTEDIN 1973

Reprinted 1980

CALIFORNIA DESERT CONSERVATION AREA

Motorized Vehicle Element
·Protection·


cdca
Mono County
BISHOP
INDEPENDENCE
117°
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N E V A D A
DEATH VALLEY NATIONAL MONUMENT
CHINA LAKE NAVAL WEAPONS CENTER
NAVAL WEAPONS CENTER
FORT IRWIN MILITARY RESERVATION
Inyo County
San Bernardino County
RIDGECREST
TO LAS VEGAS
BAKER
KELSO
NEEDLES
CALIFORNIA CITY
EDWARDS AIR FORCE BASE
Kern County
Los Angeles County
LANCASTER
BARSTOW
M O J A V E
D E S E R T
VICTORVILLE
GEO A.F.B.
MARINE CORPS BASE 29 PALMS
29 PALMS
San Bernardino County
Riverside County
JOSHUA TREE NATIONAL MONUMENT
LOS ANGELES
SAN BERNARDINO
RIVERSIDE
PALM SPGS
INDIO
BLYTHE
Imperial County
CHOCOLATE MTNS GUNNERY RANGE
ANZA BORREGO DESERT STATE PARK
NAVAL LEASE
EL CENTRO
SAN DIEGO
YUMA
M E X I C O
A R I Z O N A
P A C I F I C O C E A N
Mt. Diablo Base Line and Meridian
San Bernardino Base Line and Meridian

CLOSED TO VEHICLE TRAVEL 🟩

DESIGNATED ROADS AND WAYS TRAVEL 🟧

EXISTING ROADS AND WAYS TRAVEL 🟨

OPEN FOR VEHICLE TRAVEL 🟫

PUBLIC LANDS ☐

PRIVATE, STATE, AND OTHER FEDERALLY MANAGED LANDS ▨

PLANNING UNIT ☐

United States
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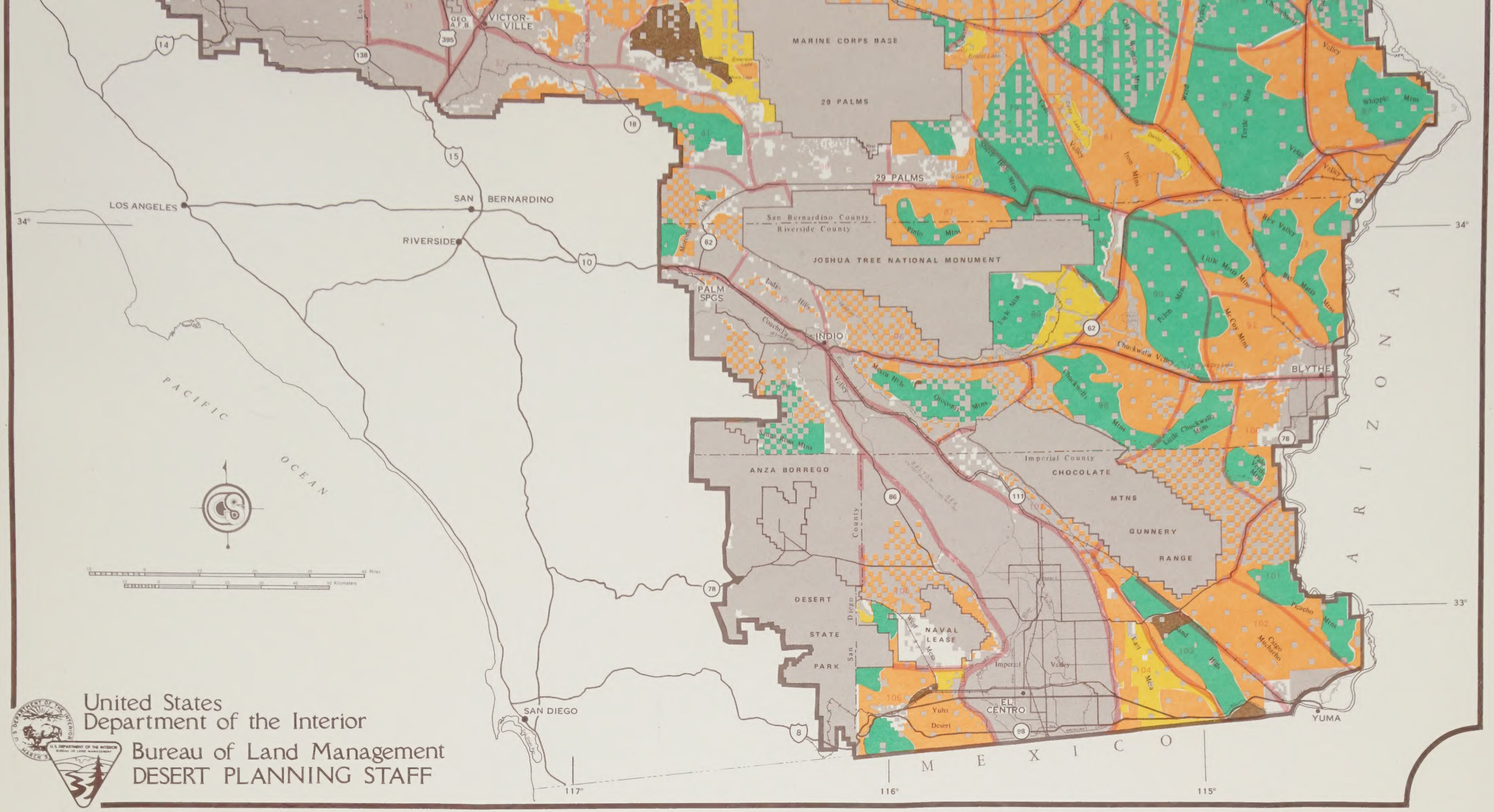
DESERT PLANNING STAFF


VICTOR-VILLE
GEO A.F.B.
MARINE CORPS BASE
29 PALMS
LOS ANGELES
SAN BERNARDINO
RIVERSIDE
PALM SPGS
INDIO
BLYTHE
San Bernardino County
Riverside County
JOSHUA TREE NATIONAL MONUMENT
Imperial County
CHOCOLATE MTNS GUNNERY RANGE
ANZA BORREGO DESERT STATE PARK
San Diego County
NAVAL LEASE
EL CENTRO
SAN DIEGO
YUMA
PACIFIC OCEAN
ARIZONA
MEXICO
34°
33°
117°
116°
115°
Miles
Kilometers

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Department of the Interior
Bureau of Land Management
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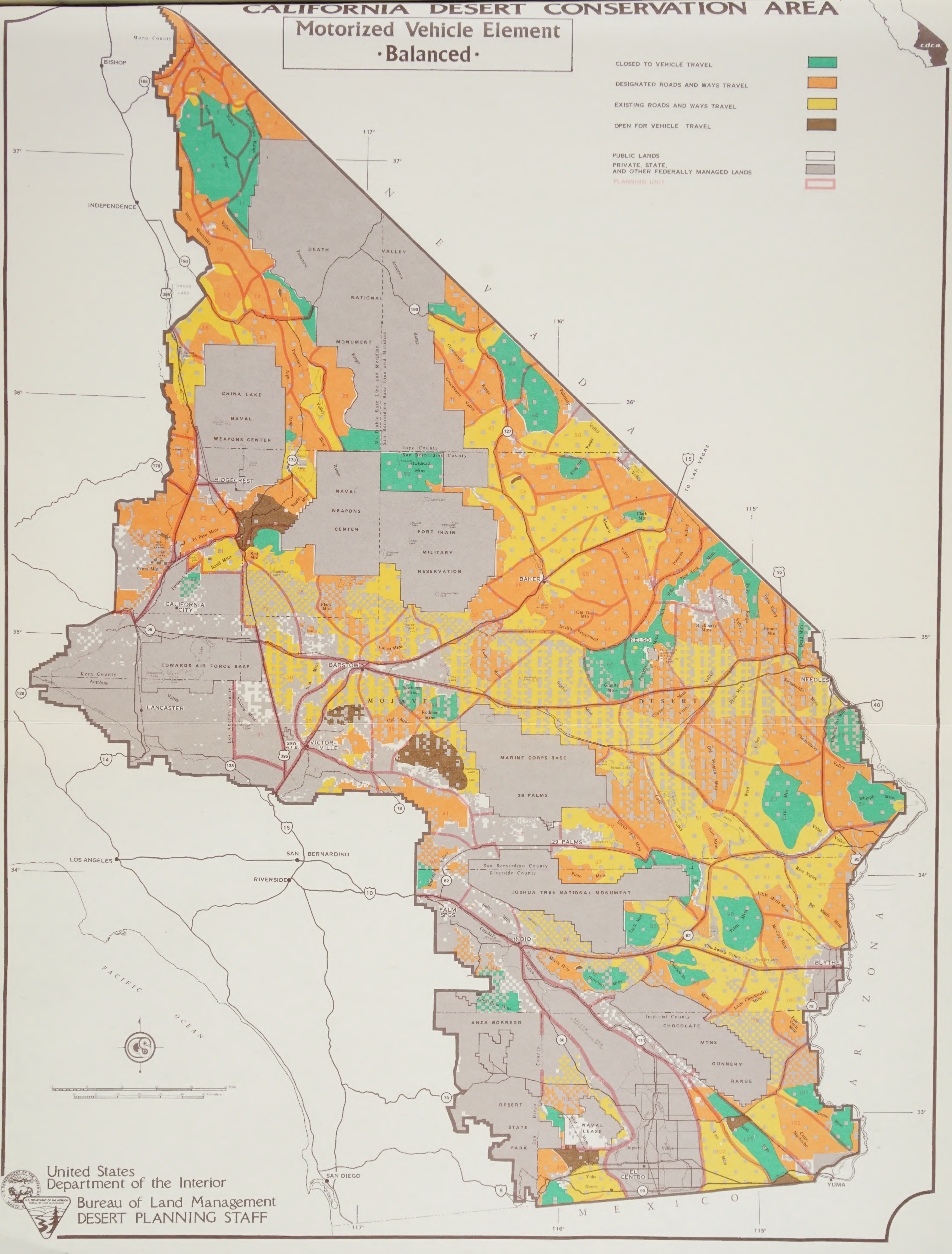
CALIFORNIA DESERT CONSERVATION AREA

Motorized Vehicle Element
·Balanced·



🟩 CLOSED TO VEHICLE TRAVEL

🟧 DESIGNATED ROADS AND WAYS TRAVEL

🟨 EXISTING ROADS AND WAYS TRAVEL

🟫 OPEN FOR VEHICLE TRAVEL

☐ PUBLIC LANDS

▨ PRIVATE, STATE, AND OTHER FEDERALLY MANAGED LANDS

☐ PLANNING UNIT

cdca
Mono County
BISHOP
INDEPENDENCE
DEATH VALLEY NATIONAL MONUMENT
Mt. Diablo Base Line and Meridian
San Bernardino Base Line and Meridian
NEVADA
TO LAS VEGAS
CHINA LAKE NAVAL WEAPONS CENTER
RIDGECREST
NAVAL WEAPONS CENTER
FORT IRWIN MILITARY RESERVATION
Inyo County
San Bernardino County
BAKER
KELSO
NEEDLES
CALIFORNIA CITY
EDWARDS AIR FORCE BASE
Kern County
Los Angeles County
LANCASTER
BARSTOW
MOJAVE
DESERT
GEO A.F.B.
VICTORVILLE
MARINE CORPS BASE
29 PALMS
LOS ANGELES
SAN BERNARDINO
RIVERSIDE
Riverside County
JOSHUA TREE NATIONAL MONUMENT
PALM SPGS
INDIO
BLYTHE
ANZA BORREGO DESERT STATE PARK
Imperial County
CHOCOLATE MTNS GUNNERY RANGE
NAVAL LEASE
EL CENTRO
YUMA
SAN DIEGO
ARIZONA
MEXICO
PACIFIC OCEAN
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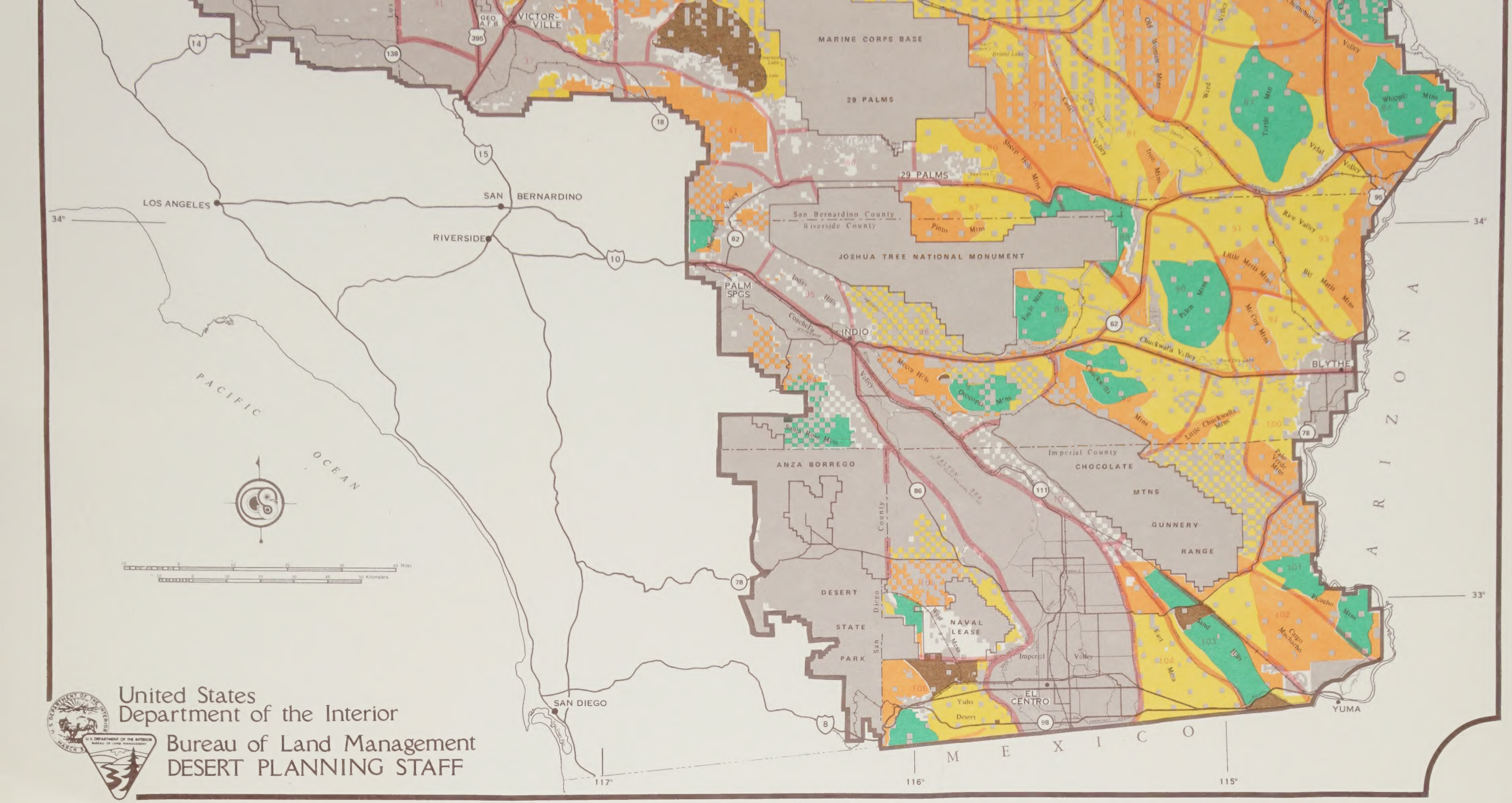
MARINE CORPS BASE
29 PALMS
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VICTOR-VILLE
GEO. A.F.B.
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JOSHUA TREE NATIONAL MONUMENT
ANZA BORREGO
DESERT STATE PARK
San Diego County
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CHOCOLATE MTNS GUNNERY RANGE
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Old Woman Mtns
Turtle Mtn
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West Mesa
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A R I Z O N A
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Miles
Kilometers

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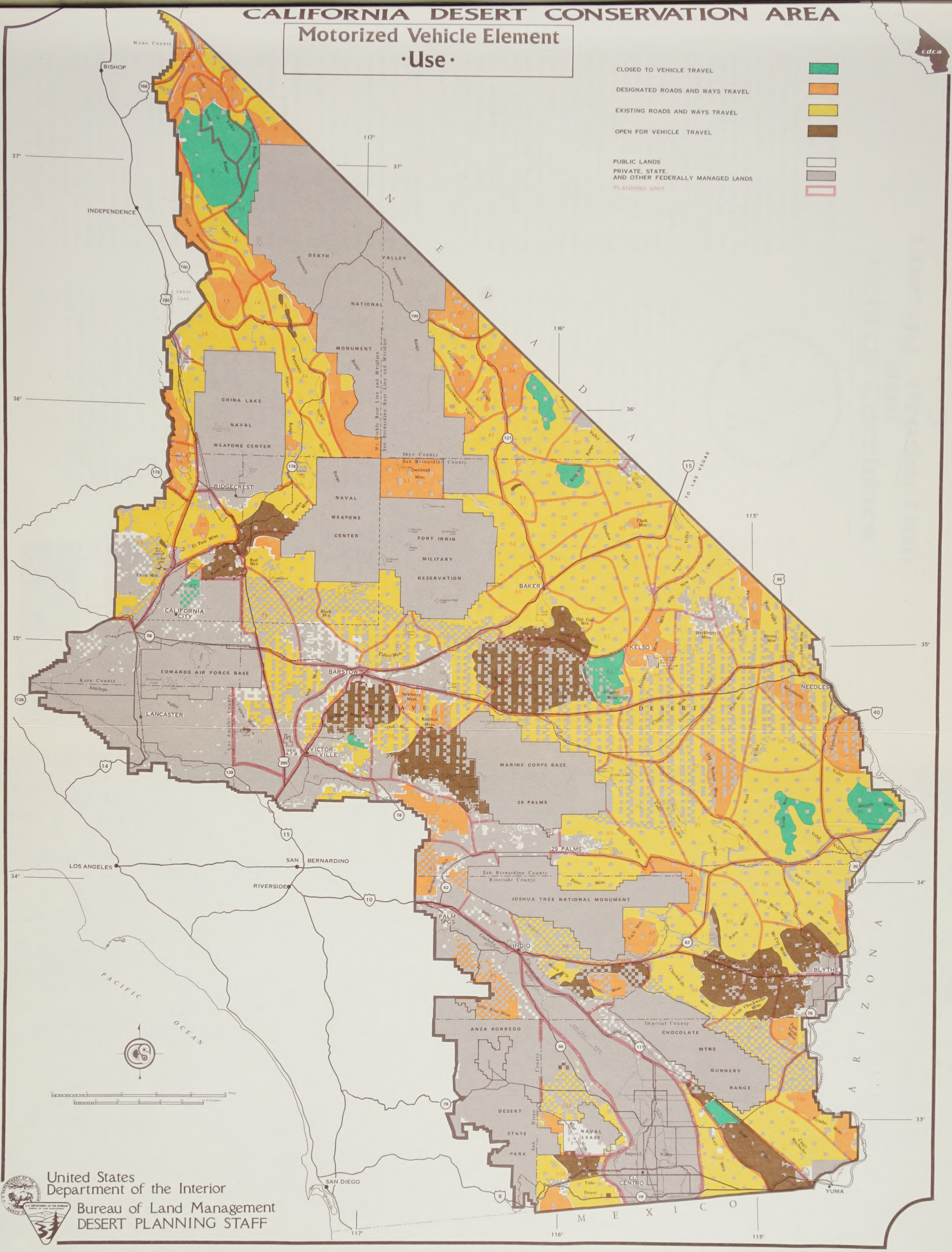
CALIFORNIA DESERT CONSERVATION AREA

Motorized Vehicle Element
·Use·



- 🟩 CLOSED TO VEHICLE TRAVEL
- 🟧 DESIGNATED ROADS AND WAYS TRAVEL
- 🟨 EXISTING ROADS AND WAYS TRAVEL
- 🟫 OPEN FOR VEHICLE TRAVEL
- ☐ PUBLIC LANDS
- ▨ PRIVATE, STATE, AND OTHER FEDERALLY MANAGED LANDS
- ☐ PLANNING UNIT

cdca
Mono County
BISHOP
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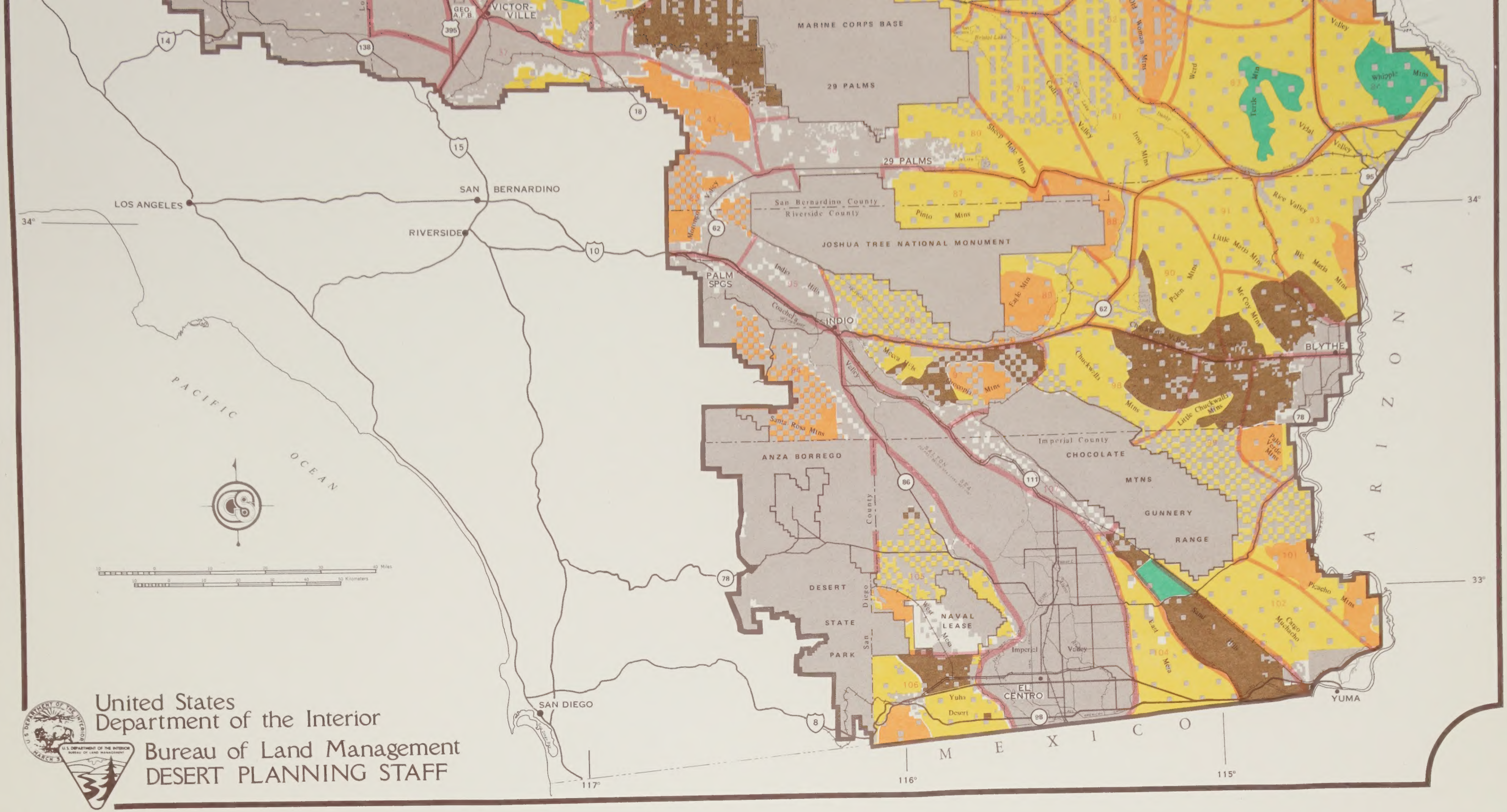
MARINE CORPS BASE
29 PALMS
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East Mesa
Sand Hills
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Kilometers

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C-5
Energy Production and Utility Corridors

BACKGROUND and ISSUES

For over 40 years the California Desert Conservation Area has been crossed or used by an increasing number of energy and utility systems. These systems include high voltage electrical lines which carry 25 percent of the electrical energy for southern California; pipelines for water, oil and other petroleum products, and 65 percent of the natural gas used in southern California; coaxial cable and microwave towers for communications; aqueducts and canals for domestic and agricultural water; sites for production of electrical energy; and other facilities which are in the public interest and which require rights-of-way over, upon, or under the public domain. The Energy Production and Utility Corridors Element addresses those systems directly related to the energy and utility industry; it does not discuss roads, trails, railroads, livestock driveways, airports, or other means of transportation.

Under current management, requests for rights-of-way are handled on a case-by-case basis. While environmental assessments are made for each project, future power needs cannot be predicted or projected so that management decisions can be made without the fear of closing some future energy or utility option. With few exceptions, right-of-way requests are initiated by utility companies.

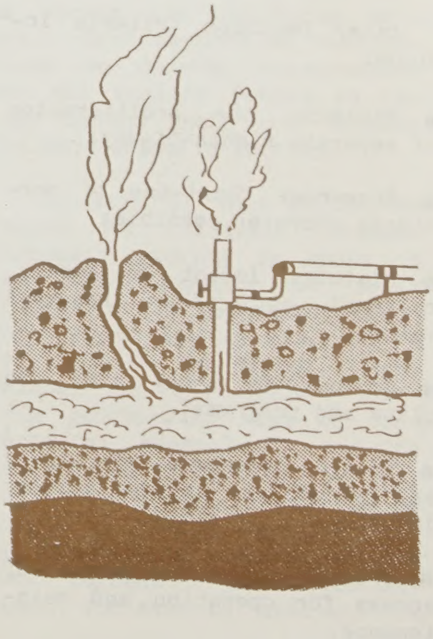
Energy production and utility transmission will certainly continue to increase. Preliminary staff forecasts of the California Energy Commission (August 1979) indicate an annual statewide growth in electrical demand of 2 percent for the period 1980-2000, and a growth in natural gas demand of 0.96 percent for the same period. Technological innovations in communications and resource transportation, such as coal slurry, and increasing demand for other products will result in still more requests for power plant and microwave sites and rights-of-way. These requests, of course, must be consistent with provisions of the National Environmental Policy Act, Federal energy policy, State-mandated programs of the California Energy Commission and Public Utilities Commission, and local plans and programs such as the San Bernardino Joint Utilities Management Program and the Imperial County Geothermal and Electrical Transmission local general plan elements, and other local programs for air and water quality, solid waste management, building and safety.

With increases in demand, energy and utility companies will seek additional rights-of-way with separation and construction factors which meet company standards for reliability and flexibility. These standards create other issues which must be considered in this element as management responsibilities. Additional rights-of-way and sites will open portions of the desert previously relatively inaccessible to vehicles. Aboveground, overground and, in some situations, underground structures may have a negative impact to visual quality, cultural resources, flora and fauna. Granting rights-of-way or sites requires extensive coordination with State and local governments and other Federal agencies; any lack of this coordination and prior notice becomes a separate issue in itself. The decisions presented in this element respond to these issues, according to the mandate of FLPMA (Section 503).

APPROACH

Section 503 of the Federal Land Policy and Management Act states:

> "In order to minimize adverse environmental impacts and the proliferation of separate rights-of-way, the utilization of rights-of-way in common shall be required to the extent practical, and each right-of-way or permit shall reserve to the Secretary concerned the right to grant additional rights-of-way or permits for compatible uses on or adjacent to rights-of-way granted pursuant to this Act. In designating right-of-way corridors and in determining whether to require that rights-of-way be confined to them, the Secretary concerned shall take into consideration national and State land use policies, environmental quality, economic efficiency, national security, safety, and good engineering and technological practices. The Secretary concerned shall issue regulations containing the criteria and procedures he will use in designating such corridors. Any existing transportation and utility corridors may be designated as transportation and utility corridors pursuant to this subsection without further review."



Consistent with these provisions, the Energy Production and Utility Corridors Element:

❶ Establishes a network of joint-use planning corridors for rights-of-way of linear facilities which vary in width from two to five miles.

❷ Designates future microwave tower sites.

❸ Displays potential power plant sites which have been "approved" by the California Energy Commission. Final approval will be shared by the California Energy Commission and other local, State and Federal agencies, including BLM, where public lands are proposed for plant sites or transmission facilities.

❹ Addresses demand for a diversity of power source technology by identifying regions occurring within multiple use classes M and I that are known geothermal resource areas (KGRAs) or have wind generation potential.

The principal criterion used in making the above decisions was a combination of demand forecasts made by the California Energy Commission and the Joint Utility Advisory Committee. This committee is a consortium of utility companies and governmental agencies who have existing utility rights-of-way in the California desert. Specific electrical and natural gas right-of-way or power plant site applications made under the provisions of this element must be consistent with adopted California Energy Commission forecasts, which are reviewed biannually.

Other Decision Criteria Include:

- Minimize the proliferation of separate rights-of-way;
- Encourage joint-use of corridors wherever possible;
- Minimize impact to scenic, cultural and other resource values;
- Conform to local land use plans and programs;
- Provide economic efficiency and reliability to the utility industry;
- Provide adequate means of access for operation and maintenance.

The major components of this element are described below.

Planning Corridors

Planning corridors are a tool for guiding the necessary detailed planning and environmental assessment work that will continue to be required when a right-of-way is requested. The establishment of a planning corridor is not an automatic grant of a right-of-way. Applications which do not conform to the adopted corridor system will be processed only after a plan amendment for the new corridor is approved. The scope of the Desert Plan allows the designation of corridors which address the following types of product transfer linear facilities:

- New electrical transmission towers and cables of 161 kv (kilovolt) or above;
- All pipelines with diameters greater than 12";
- Coaxial cable for interstate communications;
- Major aqueducts or canals for interbasin transfers of water.

The joint-use planning corridors vary in width from two to five miles. The two mile standard is selected in those instances where at least one facility currently exists. The rationale for this standard includes the following factors:

- A two-mile width provides sufficient flexibility in selecting alternate routes for a right-of-way.
- A two-mile width provides sufficient space for evaluating a number of possible alternate routes.
- A two-mile width limits the risk to natural and cultural resources within or adjacent to the corridor.
- The presence of at least one facility within the corridor demonstrates engineering feasibility.

The five-mile standard is selected in those instances where there is no existing facility and, therefore, little or no engineering and environmental data to define a narrower corridor alignment, or in those cases where so many facilities exist that a five-mile width is needed to insure sufficient space for system integrity and reliability.

The planning corridors across public lands are shown as a solid line on the element map. Where private, State or Native American land ownership dominates the landscape, the corridors are depicted as dashed lines. In these locations right-of-way alignments will be a joint responsibility of Federal, State, local, or Native American organizations.

The predominant orientation of the utility corridors is east-west, with a number of entry points to the desert along the Nevada-Arizona border and a number of exit points into the Los Angeles Basin or the San Joaquin Valley. A combination of topography, military bases, Native American concerns, wildlife management areas, and city boundaries limit the number of new entry and exit points for utility corridors. The only new entry point provided in this element is depicted on the Use Energy and Utility Element Map as a part of utility corridor "U".

It should be noted that the utility planning corridors specifically address the expansion of utility facilities constructed for the purpose of telecommunications and bulk transfers of electricity, gas, water, petroleum, and other commodities. "Expansion" is defined in this element as the construction or major modification of a tower, pipe, canal or cable to accommodate the transfer of additional products. Minor structural changes, such as the addition of cable to double circuit an existing transmission line, are not covered by the provisions of this element. Also, as new power plants are built, the element will require amendment to provide new delivery corridors. Amendment procedures are described in Part III of the plan.

Microwave Towers

Six microwave tower sites are depicted on the plan alternative maps. This element intends not only to accommodate the immediate site of the tower but also to provide space for associated infrastructure such as access roads. The construction of new towers is permitted in multiple use classes L, M, and I.

Power Plant Sites

The thirteen power plant sites shown on the plan alternative maps have been "approved" by the California Energy Commission. This approval implies only that the sites contain features which make them viable alternatives according to the power plant site selection process established by the Energy Commission. The locations of these sites are shown on the plan element alternative maps. A typical power plant occupies approximately 2500-3000 acres. The Joint Utilities Advisory Committee estimates that five to ten conventional power plants serving California power needs could be built in the CDCA or outside the state during the next twenty years.

All power plant siting in California falls primarily under the jurisdiction of the State of California Energy Commission. As proposals for electrical plants evolve, the State will take lead responsibility in determining need and consistency with the Commission's forecasts before any permit to build is issued. The Bureau of Land Management will focus on the following factors affecting the public lands and their resources:

- Consistency with the Desert Plan
- Protection of Air Quality
- Impact on Adjacent Wilderness Areas
- Visual Quality
- Cooling Water Source(s)
- Waste Disposal
- Seismic Hazards
- Regional Equity.

Potential Power Plant Siting Regions

The Joint Utility Advisory Committee provided BLM with data identifying regions in the CDCA which may be suitable for electrical generation sites. Only portions of the identified areas have had siting studies performed; the remainder has been assessed by this committee as only favorable for possible siting. In depicting the size of these regions, the Utility Committee also made allowances for air quality buffer zones, the lack of precise site identification, and other considerations. Table E-2 shows the total acreages of Joint Utility Advisory Committee identified potential siting regions which fall under compatible areas of classes M and I within each alternative. These regions are not mapped, due to the uncertainty of each region's potential and the misleading impression conveyed by the disproportionately large size of the potential siting region in relation to the small area that projected power plants will actually use.

The presence of these siting regions implies that, during the period 1980-2000, sites other than the thirteen identified on the maps may be selected for construction of new power generation facilities, although the estimated number of new power plants mentioned earlier remains the same.

Alternative Energy Sources

The Energy Production and Utilities Element recognizes the likelihood of alternative power source technologies being developed in the next twenty years. The element focuses on two forms -- geothermal and wind. Large scale solar sources were considered a likely potential at the beginning of the planning process, but subsequent investigation indicated that the mechanics and economics of solar energy for the foreseeable future dictate small, on-site applications as close to the user as possible.

The known geothermal resource areas (KGRAs) mapped for this element are those which are consistent with the M and I classes of each plan alternative. Based on present knowledge, these geothermal resource areas have the best potential for electrical generation development, a use which is permitted in these two classes. The prime areas for geothermal energy are in Imperial County, with an estimated generating capacity of 4600 megawatts, and Coso Hot Springs, estimated at 600 megawatts. Other regions of the desert have been classified as noncompetitive geothermal interest areas. These sites of exploratory drilling are managed within the context of the multiple use class guidelines and are depicted on the Mineral Exploration and Development Element Map. New data on these sites may warrant their redesignation as a KGRA or a geothermal site, requiring consideration of a plan amendment. A typical 50 megawatt geothermal plan uses about 110 acres.

Little information on the extent of wind resource areas in the CDCA has been developed; the results of the first year of monitoring of potential sites by the California Energy Commission will not be ready until December 1980. Potential wind sites within multiple use classes M and I are shown on the element alternative maps.

IMPLEMENTATION ASSUMPTIONS

Approximately 25 to 27 percent or 5,000 Mw, of southern California's electrical energy crosses the desert. An estimate provided by the Joint Utility Advisory Committee indicates that by the year 2000 a total of 20,000 Mw will be transferred in bulk from within or across the California desert. Such factors as restrictions on coastal construction and air quality issues in the Los Angeles basin area account for this dramatic increase.

Analysis of this 20,000 Mw figure is difficult because virtually nothing is known of the final location of power sources or the method of transfer. Power may be produced in the CDCA or in Nevada, Utah, Arizona or New Mexico; come from geothermal, wind or conventional technology; and be transferred by 230 kv, 500 kv, or 765 kv lines. It may be on single or double circuits; and be alternating current or direct current. If it is assumed, for example, that a single 500 kv line can deliver 1000 megawatts of power, then fifteen 500 kv lines would be required in the next 20 years to handle the utility's projections for 15,000 megawatts of growth. Thirty lines would be required if, for each 1000 megawatts, two 500 kv lines were installed to boost reliability.

A theoretical number of required planning corridors can be established by assuming that there are no geographic features or natural and cultural resource values which hinder full utilization of the corridor. With 2000 feet between individual rights-of-way, a two-mile corridor can hold five rights-of-way; a five-mile corridor, thirteen rights-of-way. Therefore, the theoretical number of planning corridors required for 15,000 megawatts on single 500 kv lines is 3 two-mile corridors or 2 five-mile corridors. If the number of lines is doubled for reliability, then 6 two-mile corridors or 3 five-mile corridors are required. The minimum number of corridors provided by any Desert Plan alternative is fifteen.

To translate this discussion into implementation assumptions, it should be remembered that planning corridors are merely general guides to the location of future rights-of-way, and the details ennumerated above would be considered in the environmental assessment of a specific project. Applications beyond corridor limits would be processed only after a plan amendment is approved.

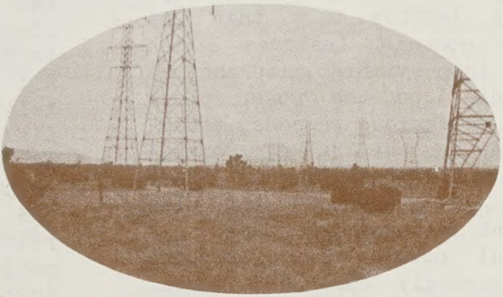
New technologies will dictate amendment considerations for planning corridors, plant sites, geothermal leasing and wind generation sites. Amendments to other portions of the California Desert Plan may also have an impact on this element.

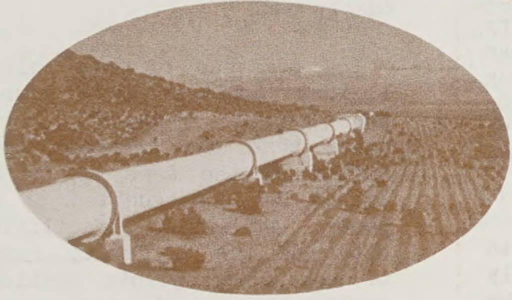
As previously noted, the Joint Utility Advisory Committee has identified the need for five to ten new conventional power plants in the next 20 years. Both this projection and the Committee's estimate of the increase in bulk power transfer are assumed to be consistent with the California Energy Commission's adopted forecasts, mentioned earlier.

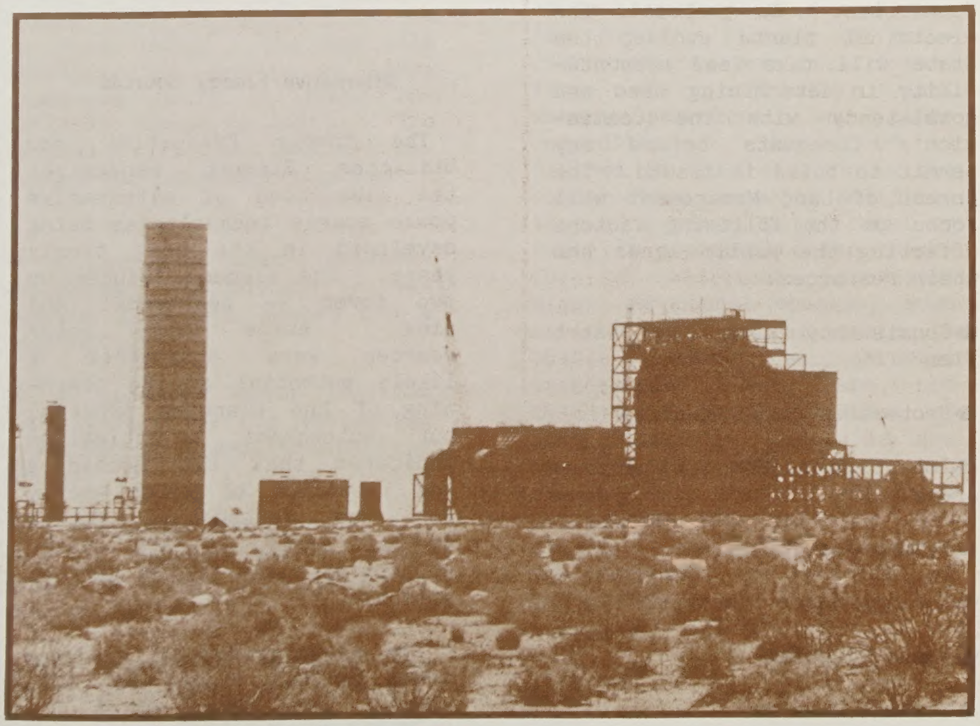
Finally, the natural gas industry anticipates that the existing system is adequate to meet demand to the year 2000. New construction will only complete intrasystem ties, with the exception of the Pacific Gas and Electric Company gasline from Wyoming which will tie into the company's existing line southwest of Needles.

MONITORING

Specific monitoring of the facets of this element in terms of supply and demand adequacy will occur within the context of the policy of the California Energy Commission, national energy policy and programs, and local land use plans. Monitoring of environmental impacts and mitigation effectiveness will be oriented towards assessing effects over time of selected specific projects, such as a particular developed geothermal field or a fossil fuel power plant. Air quality, water quality supply and effects on vegetation and wildlife will be tracked.







ENERGY PRODUCTION AND UTILITY CORRIDORS

Plan Alternatives

● NO ACTION ALTERNATIVE ●

Relationship to Issues

The lack of comprehensive, long range planning represented by this alternative is a root cause of energy and utility-related issues. Under this proposal BLM does not anticipate future right-of-way or plant selection activity until a notification of intent is filed with the appropriate government organization. In such a reactive position, the Bureau has little time or options for natural and cultural resource management. Values are simply pushed aside to accommodate yet another energy or utility project.

Objective

Continue to evaluate electrical transmission lines, pipelines, microwave towers, and power production plants on a case-by-case basis to meet projected energy and utility needs for the period 1980-2000.

Element Components

This alternative provides maximum flexibility in siting energy production and utility facilities. Components for this alternative, therefore, cannot be mapped. However, existing facility rights-of-way are shown on each action alternative map. Each right-of-way or site will be identified when application is made to the Bureau.

● PROTECTION ALTERNATIVE ●

Relationship to Issues

To meet demand for the period 1980-2000, this alternative establishes a minimum number of transmission corridors, power generation and microwave sites, and identifies geothermal and wind siting regions. This alternative substantially reduces the potential for proliferation of rights-of-way, as most corridors are already occupied by at least one linear facility.

> "The utility industry has special significance to desert residents. If not controlled they could blight all desert values..."

Objective

Provide sufficient alternative transmission corridors and energy plant sites to give a reasonable degree of flexibility and reliability for meeting energy and utility demand for the period 1980-2000 and avoid significant environmental impacts on sensitive resources.

Element Components

This alternative contains fifteen planning corridors, depicted on Protection Energy and Utility Element Map as "A" through "O". Three of these corridors contain no facilities. Six approved power plan sites are provided in this alternative.

This alternative also provides access to 511,000 acres of power plant siting potential, 13,000 acres of wind siting potential, and 26,000 acres of known geothermal resource areas.

● BALANCED ALTERNATIVE ●

Relationship to Issues

This alternative establishes a system of planning corridors that offers a greater degree of choices than the Protection Alternative for selecting power transmission rights-of-way. Additional space is provided for the development of wind and geothermal power plant potential. Also, additional approved power plant sites, consistent with the Multiple Use Class Guidelines, are shown on the Balanced Energy and Utility Element Map. The level of flexibility and reliability is increased by the greater latitude of choice provided utility companies.

> "Corridors should not go thru scenic or fragile areas. Trade offs should be made to avoid high energy costs, and hardships."

Objective

Provide a system of utility planning corridors and energy production choices which offers a level of flexibility that protects significant natural and cultural values while encouraging the use of suitable resources.

Element Components

This alternative contains twenty planning corridors, depicted on the Balanced Energy and Utility Element Map as "A" thorough "T". Four of these corridors contain no facilities. Six approved power plant sites are provided in the alternative. Access is provided to 2,435,000 acres of power plant siting potential, 37,000 acres of wind siting regions, and 100,000 acres of known geothermal resource areas.

● USE ALTERNATIVE ●

Relationship to Issues

This alternative establishes a system of planning corridors that offers a wide range of choice for power transmission right-of-way selection. However, the choices available remain within the planning corridors established for this alternative. Optimum opportunities exist for selection of approved power plant sites and wind and geothermal generation sites. The level of flexibility and reliability is equivalent to the needs assessment of the Joint Utility Advisory Committee.

> "For the welfare of the people of California, utility expansion must be considered as essential in the desert."

Objective

Provide for a very high level of system flexibilty and reliability for designating utility corridors and energy generating facilities.

Element Components

The Use Alternative contains 28 planning corridors, depicted on the Use Energy and Utility Element Map as "A" through "BB". Six of these corridors contain no facilities. Thirteen approved power plant sites are provided in this alternative. Also included are 3,669,000 acres of power plant siting potential, 77,000 acres of wind siting potential, and 194,000 acres of known geothermal resource areas.

COMPARATIVE ANALYSIS OF ALTERNATIVES

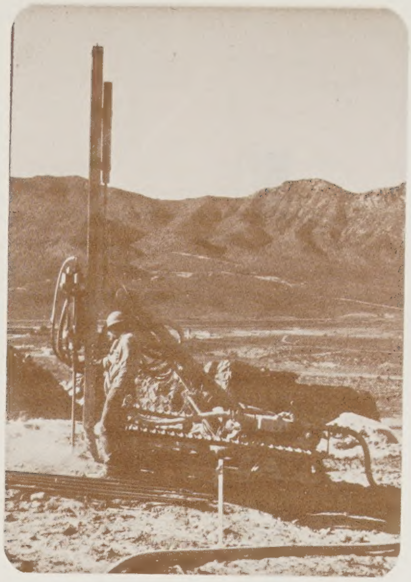
The following two tables compare by plan alternative the utility corridor options (Table No. E - 1) and the utility and energy production potentials (Table No. E - 2).

Table E-1

COMPARATIVE UTILITY ELEMENT MATRIX

X = Planning Corridors which are part of the Alternative.
No Action Alternative does not restrict facilities to corridors.

Corridor	Width	Existing Facilities	Protection Alternative	Balanced Alternative	Use Alternative
A	2 miles	230-kv power line 800-dc power line	X	X	X
B	2 miles	2/230-kv power lines	X	X	X
C	2 miles	500-kv power line	X	X	X
D	2 miles	2/287-kv power lines 500-kv power line	X	X	X
E	3 miles	2/230-kv power lines Telephone pole line	X	X	X
F	2 miles	None	X		
	5 miles			X	X
G	2 miles	30-in. pipeline	X	X	X
H	2 miles	34-in. pipeline	X	X	X
I	2 miles	230-kv power line	X	X	X
J	2 miles	161-kv power line	X	X	X
K	2 to 4 miles	2/30-in. pipelines Coaxial cable Telephone pole line	X	X	X
L	2 miles	161-kv power line Canal	X	X	X
M	2 miles	None	X	X	X
N	2 miles	None	X	X	
	5 miles				X
O	2 miles	12-in. pipeline	X	X	X
P	2 miles	2/115-kv power lines 12-in. pipeline Coaxial cable		X	X
Q	5 miles	Coaxial cable		X	X
R	2 miles	Telephone pole line		X	X
S	2 miles	None		X	
	5 miles	None			X
T	2 miles	12-in. pipeline		X	X
U	5 miles	None			X
V	5 miles	None			X
W	2 miles	500-kv power line 2/230-kv power line			X
X	2 miles	34-in. pipeline 500-kv power line			X
Y	2 miles	Aqueduct Telephone pole line			X
Z	2 miles	92-kv power line			X
AA	4 miles	2/500-kv power lines			X
BB	3 miles	Coaxial cable Pipeline 131-kv power line			X



To avoid misinterpretation of these tables, it should be recognized that the total number of electrical transmission lines, pipelines, microwave sites, and conventional power plant generation sites developed in the future will not likely be changed by the application of any of these alternatives. There is simply a wider choice of areas available as one progresses from the Protection Alternative to the Use Alternative. The No Action Alternative does not constrain applicants, as siting decisions proceed strictly on a case-by-case basis; approved power plant sites and presently occupied transmission corridors are shown for information only.

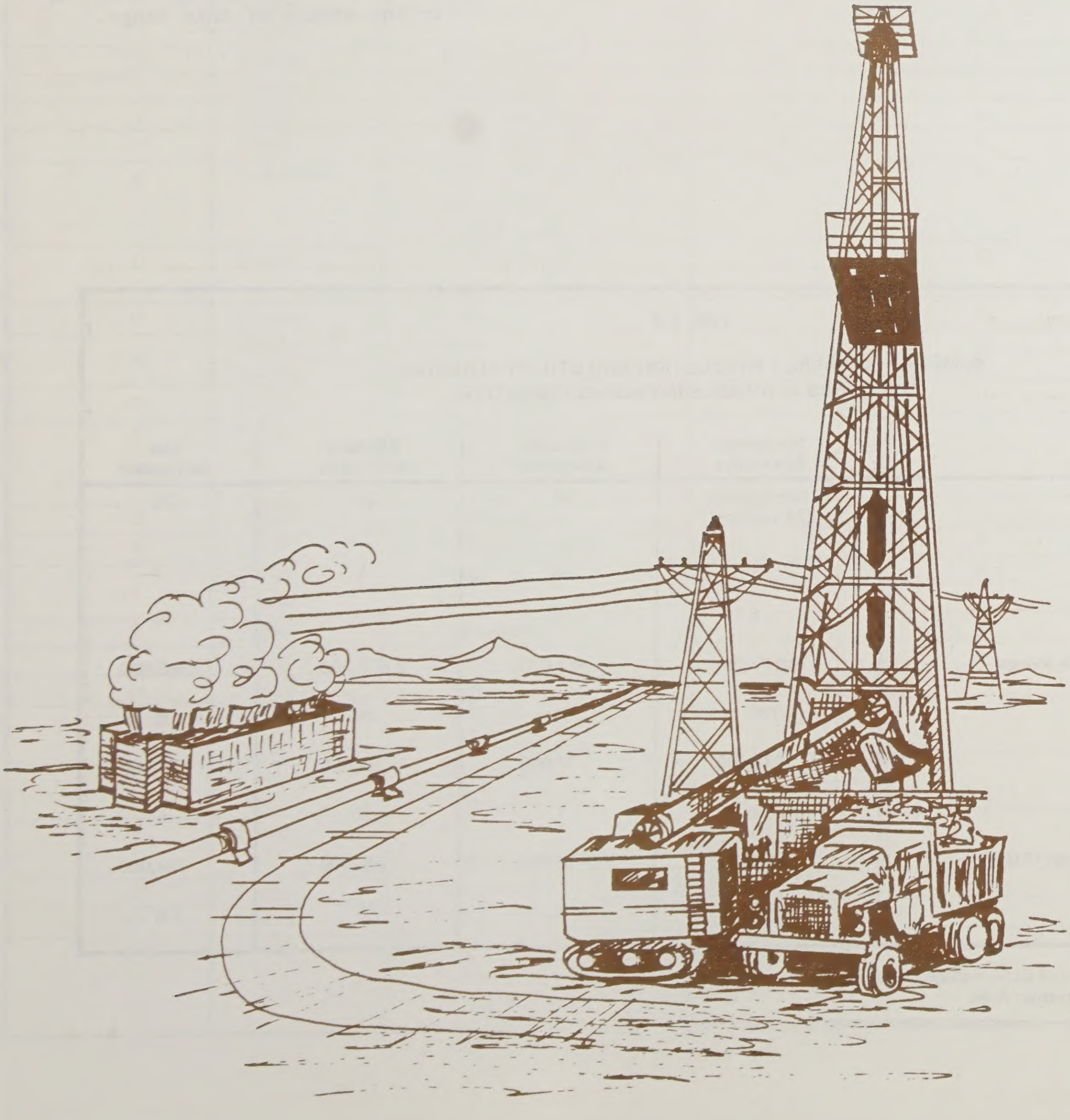
The availability of potential development opportunity for geothermal and wind energy sources is somewhat different, since these resources are geographically very limited. The Balanced Alternative has three times as much identified wind potential acreage available for development as the Protection Alternative; the Use Alternative has twice as much of this resource potential available as the Balanced Alternative. Similarly, KGRA acreage open for development quadruples from the Protection to the Balanced Alternative, and further doubles in the Use Alternative. The No Action Alternative approximates the Use Alternative in this availability. While overall power demands remain constant, the No Action and Use Alternatives provides six to eight times more potential for alternative energy development than the Protection Alternative, with the Balanced Alternative falling approximately in the middle of this range.

Table E-2

SUMMARY OF ENERGY PRODUCTION AND UTILITY PLANNING CORRIDORS AVAILABLE IN EACH ALTERNATIVE

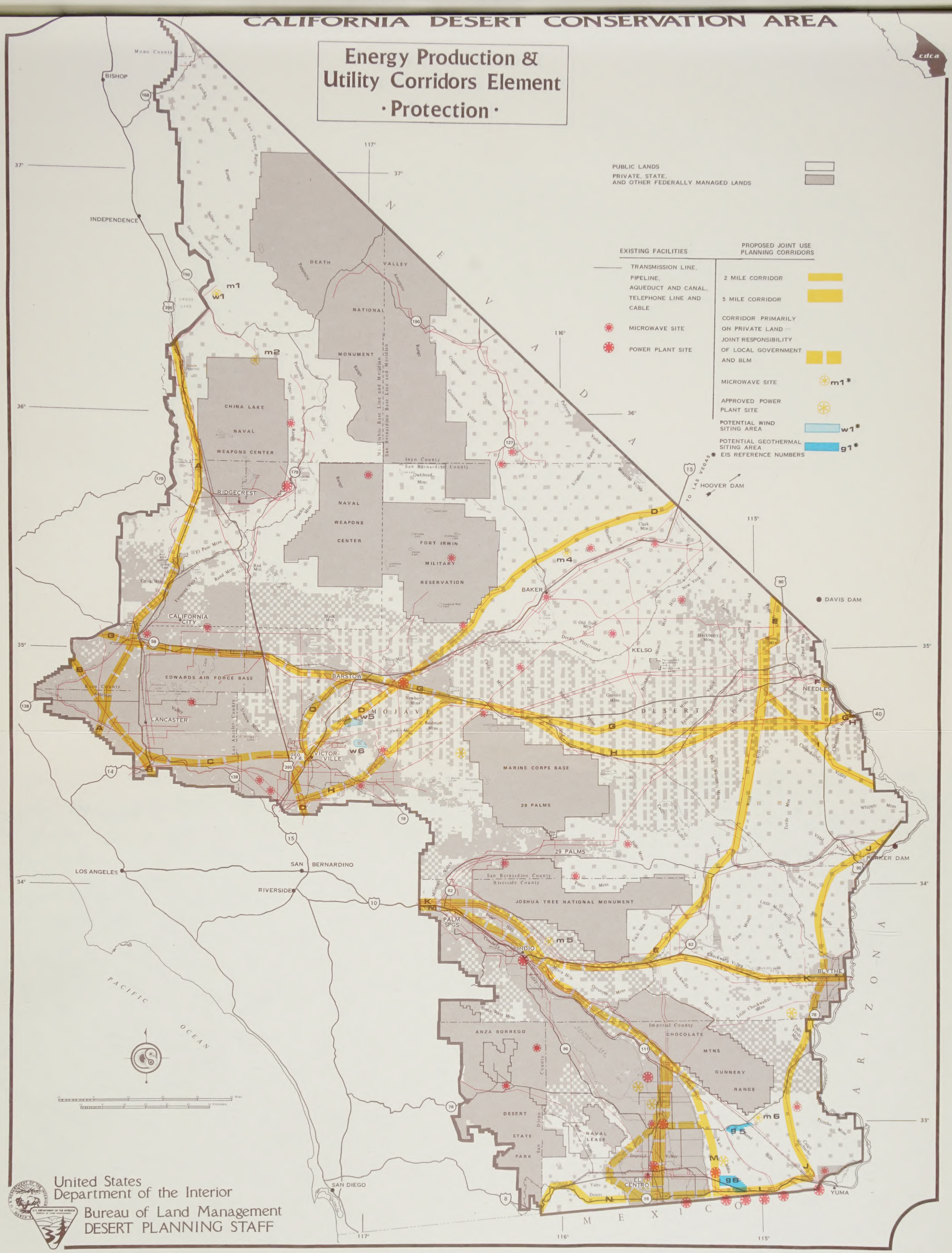
	No Action Alternative	Protection Alternative	Balanced Alternative	Use Alternative
Planning corridors	Not limited (21 existing)	15	20	28
Approved power plant sites	13	6	6	13
Microwave sites	6	5	5	6
Power generator siting region acreage	Not limited	511,000	2,435,000	3,669,000
% of public lands[a]	100	4	20	30
Wind generation acreage	77,000	13,000	37,000	77,000
% of public lands[a]	.6	.1	.3	.6
Geothermal generation acreage (KGRA)	194,000	26,000	100,000	194,000
% of public lands[a]	1.6	.2	.8	1.6

[a] There are 12.1 million acres of BLM-managed lands within the California Desert Conservation Area.



CALIFORNIA DESERT CONSERVATION AREA

Energy Production & Utility Corridors Element
· Protection ·


cdca
PUBLIC LANDS
PRIVATE, STATE, AND OTHER FEDERALLY MANAGED LANDS
EXISTING FACILITIES
TRANSMISSION LINE, PIPELINE, AQUEDUCT AND CANAL, TELEPHONE LINE AND CABLE
MICROWAVE SITE
POWER PLANT SITE
PROPOSED JOINT USE PLANNING CORRIDORS
2 MILE CORRIDOR
5 MILE CORRIDOR
CORRIDOR PRIMARILY ON PRIVATE LAND — JOINT RESPONSIBILITY OF LOCAL GOVERNMENT AND BLM
MICROWAVE SITE m1*
APPROVED POWER PLANT SITE
POTENTIAL WIND SITING AREA w1*
POTENTIAL GEOTHERMAL SITING AREA g1*
* EIS REFERENCE NUMBERS
Mono County
BISHOP
INDEPENDENCE
DEATH VALLEY NATIONAL MONUMENT
CHINA LAKE NAVAL WEAPONS CENTER
NAVAL WEAPONS CENTER
FORT IRWIN MILITARY RESERVATION
RIDGECREST
CALIFORNIA CITY
EDWARDS AIR FORCE BASE
LANCASTER
VICTORVILLE
GEO A.F.B.
BARSTOW
BAKER
KELSO
MOJAVE DESERT
NEEDLES
DAVIS DAM
MARINE CORPS BASE 29 PALMS
29 PALMS
PARKER DAM
JOSHUA TREE NATIONAL MONUMENT
PALM SPGS
INDIO
BLYTHE
ANZA BORREGO DESERT STATE PARK
CHOCOLATE MTNS GUNNERY RANGE
NAVAL LEASE
EL CENTRO
YUMA
SAN BERNARDINO
LOS ANGELES
RIVERSIDE
SAN DIEGO
PACIFIC OCEAN
NEVADA
ARIZONA
MEXICO
TO LAS VEGAS
HOOVER DAM
Inyo County
San Bernardino County
Riverside County
Imperial County
Kern County
Los Angeles County
Mt. Diablo Base Line and Meridian
San Bernardino Base Line and Meridian
m1
w1
m2
m4
w5
w6
m5
m6
g5
g6
A
B
C
D
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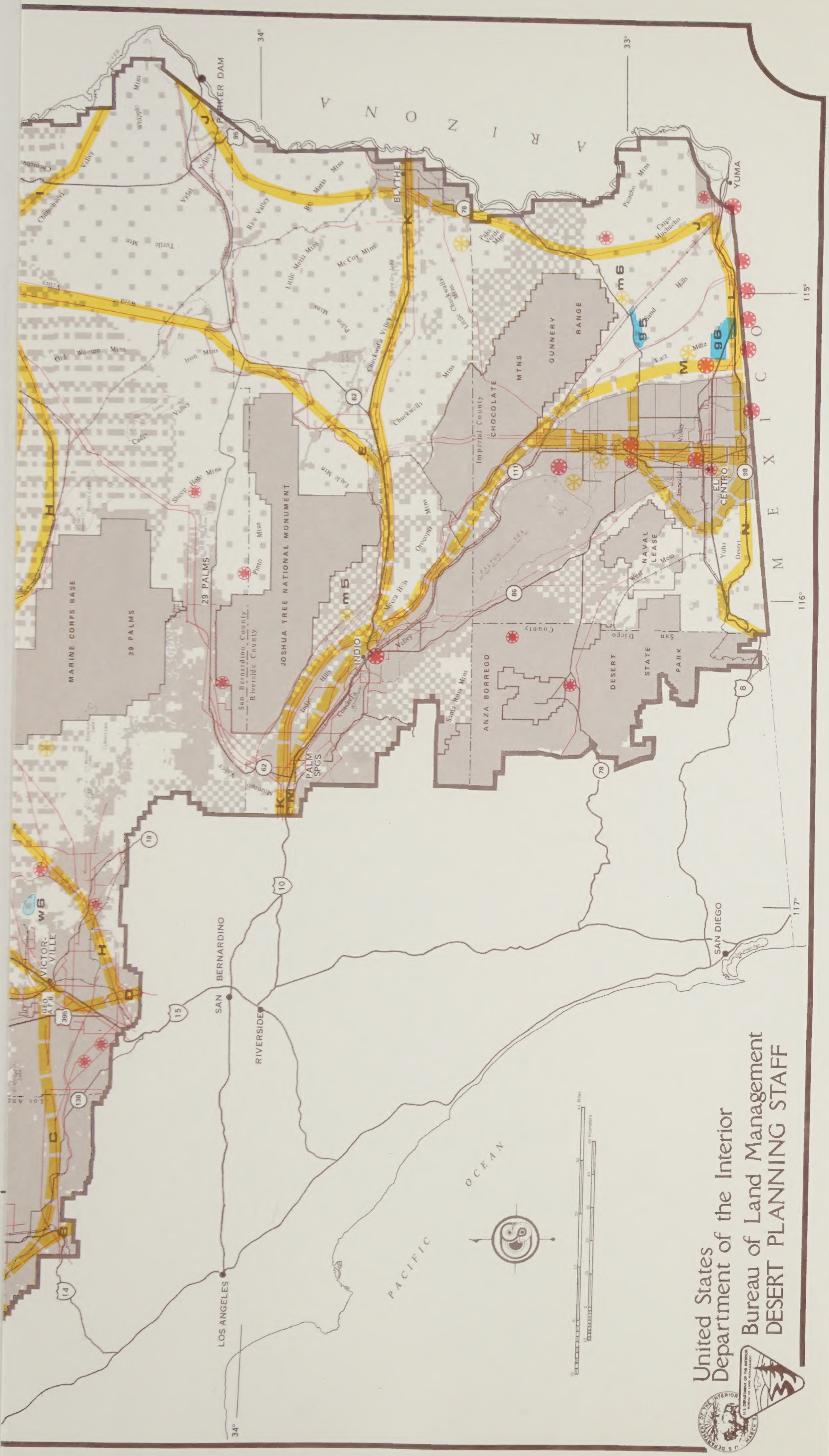
N
37°
36°
35°
34°
33°
117°
116°
115°
Miles
Kilometers

United States
Department of the Interior
Bureau of Land Management
DESERT PLANNING STAFF



ARIZONA
MEXICO
PACIFIC OCEAN
PARKER DAM
BLYTHE
YUMA
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JOSHUA TREE NATIONAL MONUMENT
ANZA BORREGO DESERT STATE PARK
CHOCOLATE MTNS GUNNERY RANGE
NAVAL LEASE
SALTON SEA
Imperial County
San Bernardino County
Riverside County
San Diego County
Whipple Mtns
Turtle Mtn
Old Woman Mtns
Iron Mtns
Big Maria Mtns
Little Maria Mtns
Mc Coy Mtns
Palen Mtns
Chuckwalla Mtns
Little Chuckwalla Mtns
Eagle Mtn
Orocopia Mtns
Pinto Mtns
Sheep Hole Mtns
Santa Rosa Mtns
Palo Verde Mtns
Cargo Muchacho Mtns
Picacho Mtns
Sand Hills
East Mesa
West Mesa
Yuha Desert
Imperial Valley
Rice Valley
Vidal Valley
Chemehuevi Valley
Chuckwalla Valley
Cadiz Valley
Coachella Valley
Mecca Hills
Indio Hills
Morongo Valley
H
I
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m6
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62
111
86
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8
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15
18
138
395
14
34°
33°
115°
116°
117°
Miles
Kilometers

United States
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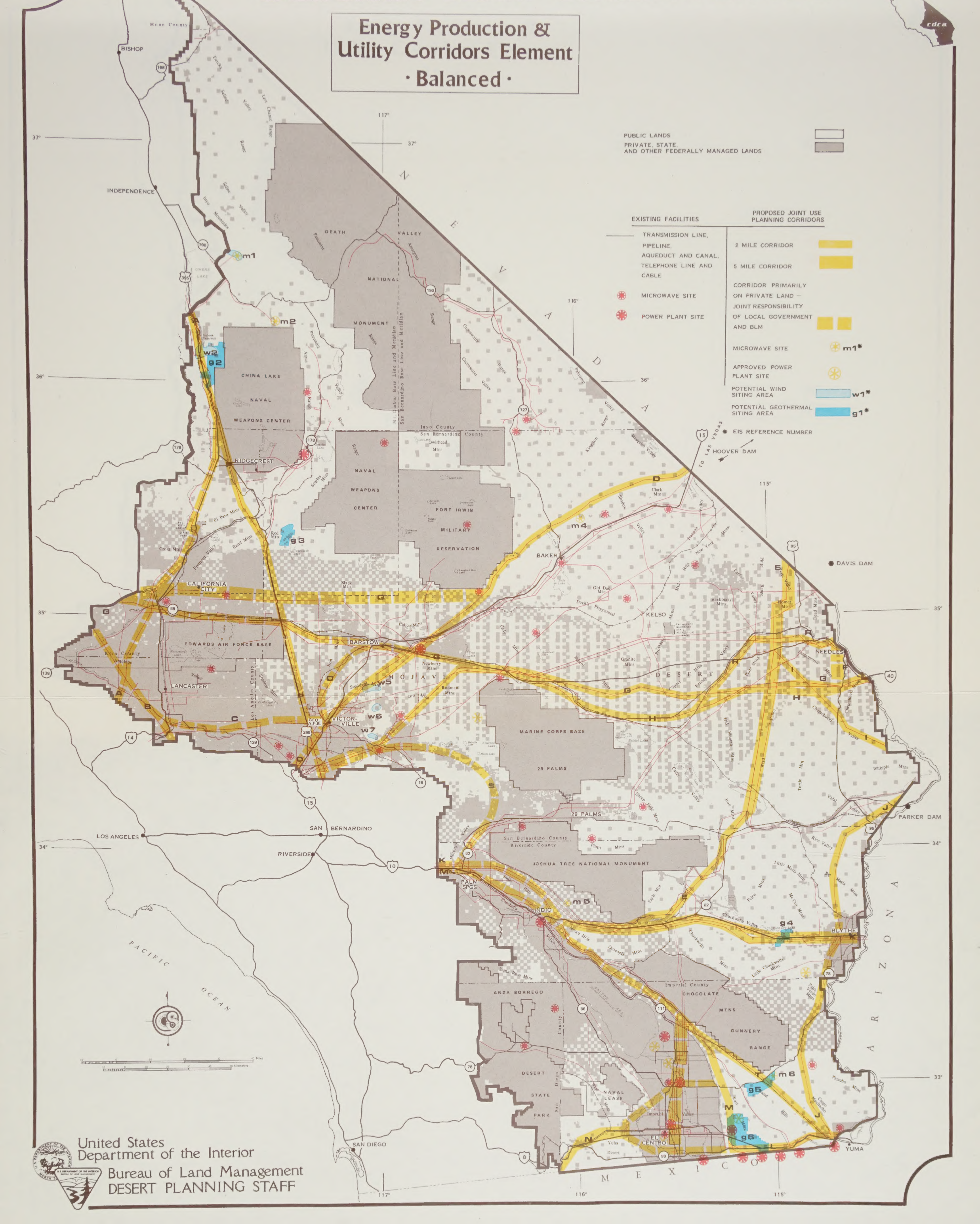
DESERT PLANNING STAFF

CALIFORNIA DESERT CONSERVATION AREA

Energy Production & Utility Corridors Element
· Balanced ·



cdca
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MARINE CORPS BASE 29 PALMS
JOSHUA TREE NATIONAL MONUMENT
ANZA BORREGO DESERT STATE PARK
CHOCOLATE MTNS GUNNERY RANGE
NAVAL LEASE
N E V A D A
A R I Z O N A
M E X I C O
PACIFIC OCEAN
TO LAS VEGAS
HOOVER DAM
DAVIS DAM
PARKER DAM
RIDGECREST
CALIFORNIA CITY
BAKER
KELSO
BARSTOW
NEEDLES
LANCASTER
VICTORVILLE
GEO A.F.B.
29 PALMS
PALM SPGS
INDIO
BLYTHE
EL CENTRO
YUMA
LOS ANGELES
SAN BERNARDINO
RIVERSIDE
SAN DIEGO
Inyo County
San Bernardino County
Kern County
Los Angeles County
Riverside County
Imperial County
San Diego County
MOJAVE DESERT
m1
m2
m4
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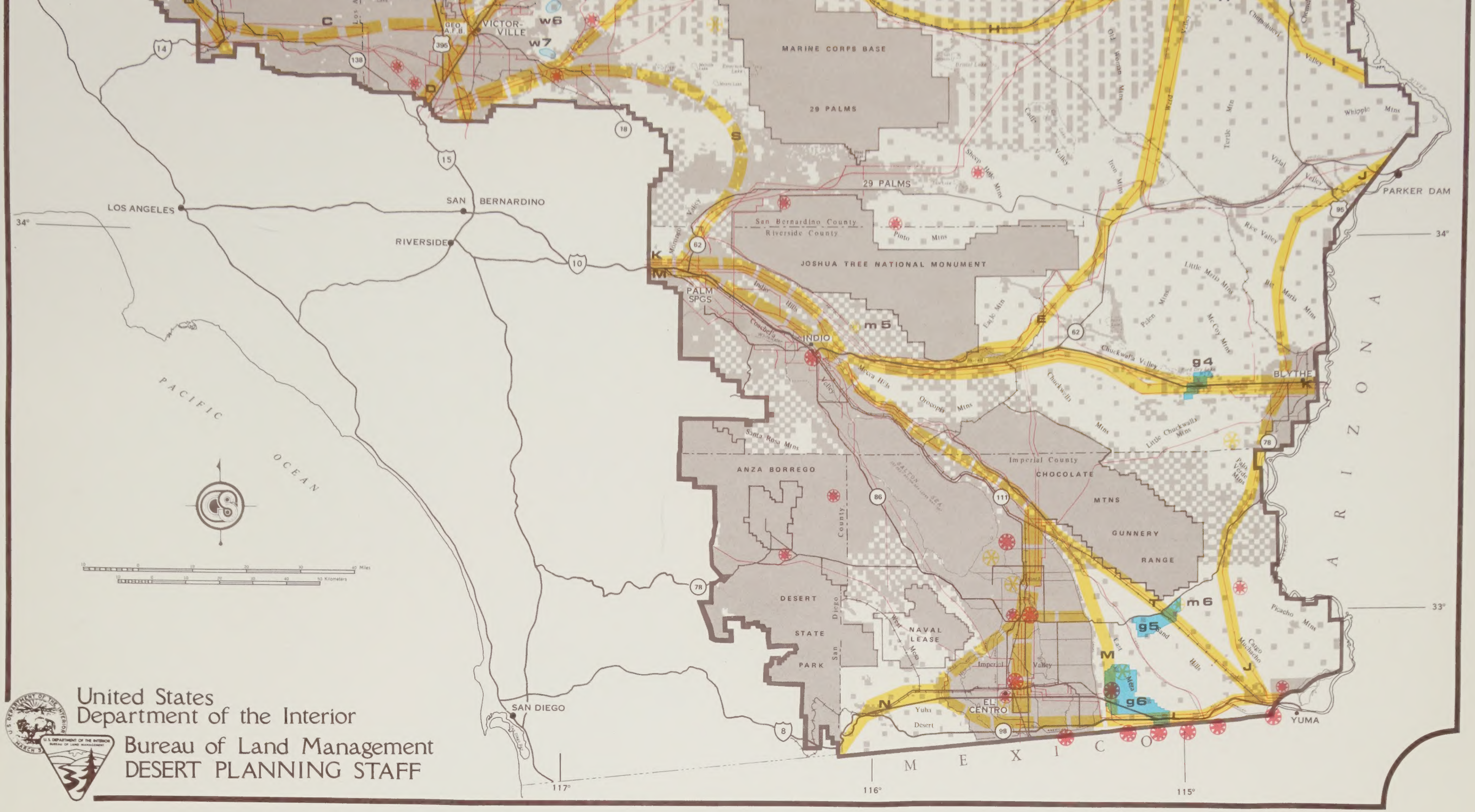

MARINE CORPS BASE
29 PALMS
JOSHUA TREE NATIONAL MONUMENT
San Bernardino County
Riverside County
Imperial County
San Diego County
ANZA BORREGO
DESERT STATE PARK
CHOCOLATE MTNS GUNNERY RANGE
NAVAL LEASE
SALTON SEA
LOS ANGELES
SAN BERNARDINO
RIVERSIDE
SAN DIEGO
VICTORVILLE
GEO. A.F.B.
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Miles
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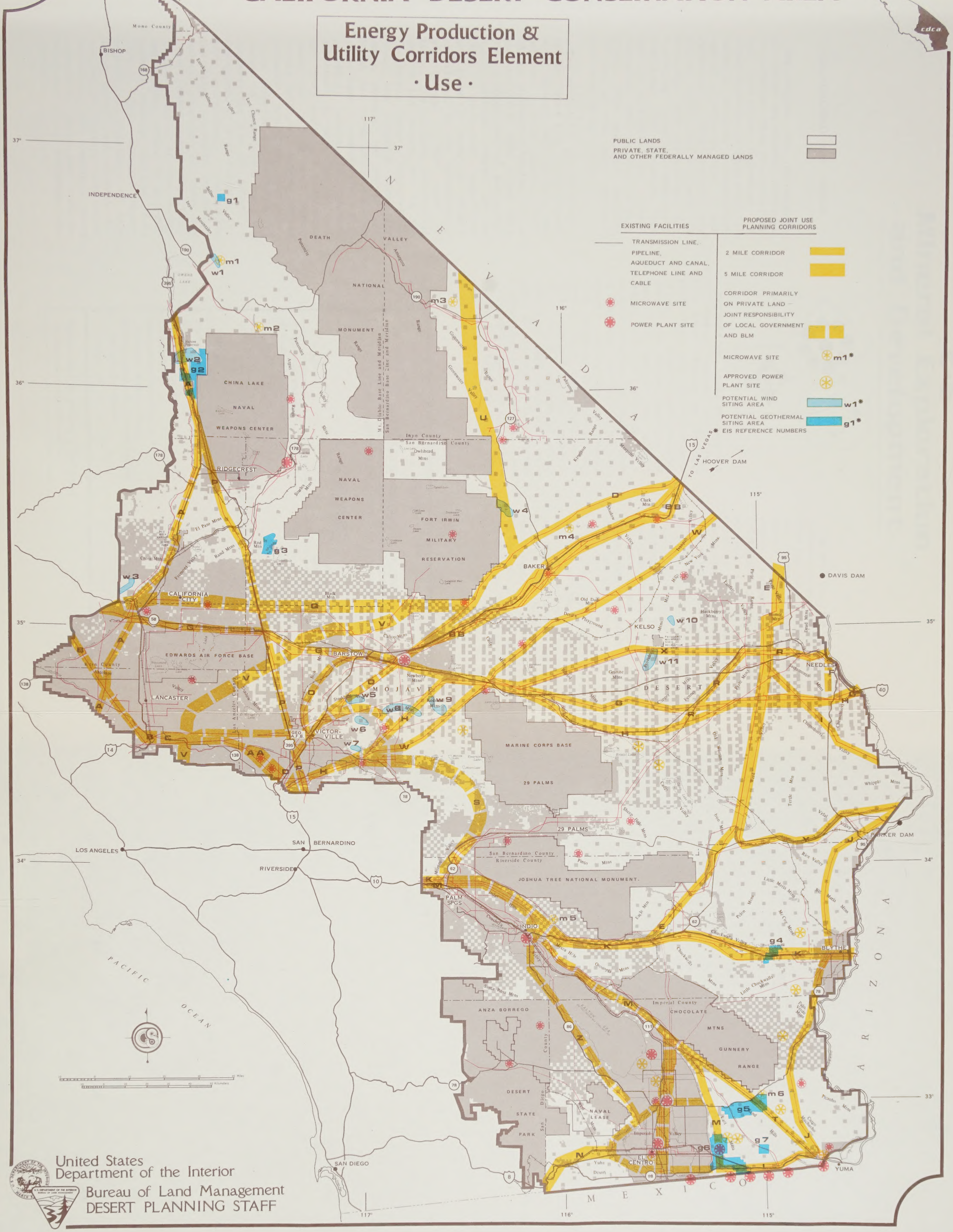
CALIFORNIA DESERT CONSERVATION AREA

Energy Production & Utility Corridors Element
· Use ·


cdca
PUBLIC LANDS
PRIVATE, STATE, AND OTHER FEDERALLY MANAGED LANDS
EXISTING FACILITIES
TRANSMISSION LINE, PIPELINE, AQUEDUCT AND CANAL, TELEPHONE LINE AND CABLE
MICROWAVE SITE
POWER PLANT SITE
PROPOSED JOINT USE PLANNING CORRIDORS
2 MILE CORRIDOR
5 MILE CORRIDOR
CORRIDOR PRIMARILY ON PRIVATE LAND — JOINT RESPONSIBILITY OF LOCAL GOVERNMENT AND BLM
MICROWAVE SITE m1*
APPROVED POWER PLANT SITE
POTENTIAL WIND SITING AREA w1*
POTENTIAL GEOTHERMAL SITING AREA g1*
* EIS REFERENCE NUMBERS
Mono County
BISHOP
INDEPENDENCE
DEATH VALLEY NATIONAL MONUMENT
CHINA LAKE NAVAL WEAPONS CENTER
RIDGECREST
NAVAL WEAPONS CENTER
FORT IRWIN MILITARY RESERVATION
Inyo County
San Bernardino County
N E V A D A
TO LAS VEGAS
HOOVER DAM
DAVIS DAM
BAKER
KELSO
CALIFORNIA CITY
EDWARDS AIR FORCE BASE
Kern County
LANCASTER
Los Angeles County
BARSTOW
MOJAVE DESERT
GEORGE A F B
VICTORVILLE
MARINE CORPS BASE
29 PALMS
NEEDLES
PARKER DAM
SAN BERNARDINO
LOS ANGELES
RIVERSIDE
PALM SPGS
INDIO
JOSHUA TREE NATIONAL MONUMENT
San Bernardino County
Riverside County
BLYTHE
Imperial County
CHOCOLATE MTNS GUNNERY RANGE
ANZA BORREGO DESERT STATE PARK
NAVAL LEASE
EL CENTRO
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SAN DIEGO
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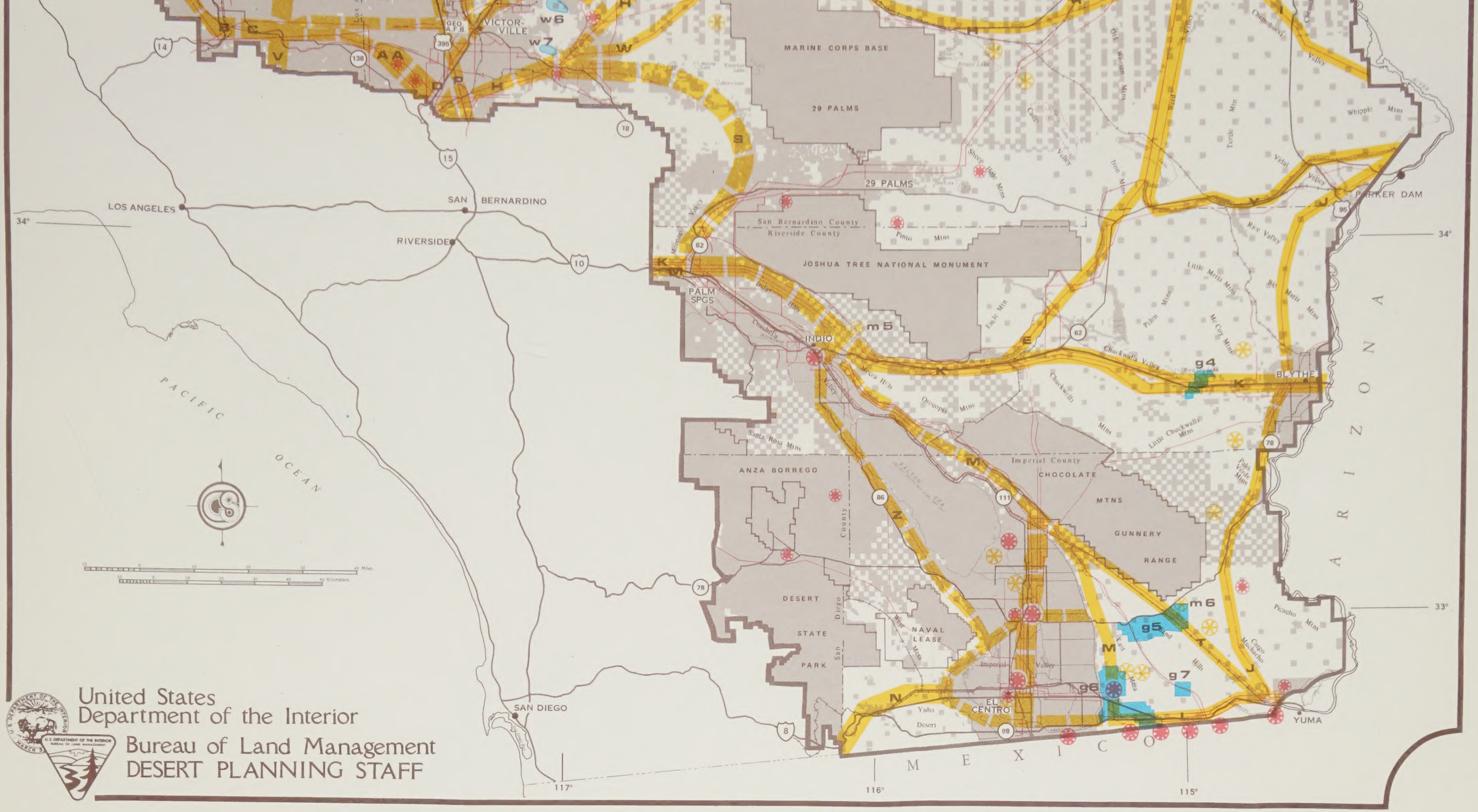
MARINE CORPS BASE
29 PALMS
29 PALMS
JOSHUA TREE NATIONAL MONUMENT
San Bernardino County
Riverside County
Imperial County
San Diego County
ANZA BORREGO DESERT STATE PARK
CHOCOLATE MTNS GUNNERY RANGE
NAVAL LEASE
LOS ANGELES
SAN BERNARDINO
RIVERSIDE
SAN DIEGO
VICTOR-VILLE
GEO A.F.B.
PALM SPGS
INDIO
BLYTHE
EL CENTRO
YUMA
PARKER DAM
PACIFIC OCEAN
ARIZONA
MEXICO
34°
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117°
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115°
w6
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m5
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g4
g5
g6
g7
Whipple Mtns
Turtle Mtn
Old Woman Mtns
Iron Mtns
Sheep Hole Mtns
Pinto Mtns
Eagle Mtn
Palen Mtns
Little Maria Mtns
Big Maria Mtns
McCoy Mtns
Chuckwalla Valley
Chuckwalla Mtns
Little Chuckwalla Mtns
Orocopia Mtns
Mecca Hills
Santa Rosa Mtns
Indio Hills
Coachella Valley
Morongo Valley
Rice Valley
Vidal Valley
Chemehuevi Valley
Palo Verde Mtns
Picacho Mtns
Cargo Muchacho Mtns
Sand Hills
East Mesa
West Mesa
Imperial Valley
Yuha Desert
SALTON SEA
Cadiz Valley
Ward Valley
Miles
Kilometers
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18
10
62
78
86
111
98
8
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138
395
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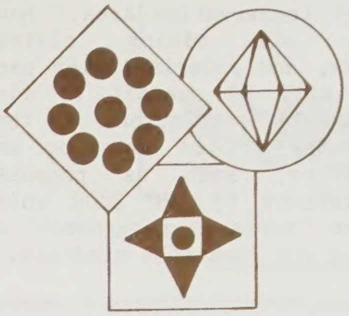
C-6
Mineral Exploration and Development



BACKGROUND and ISSUES

Exploration and development of energy and mineral resources is different from the resources and activities addressed in other elements in this plan because it involves a consumptive use of a resource that is not renewable. This activity requires that public land be available and accessible, introducing potential management conflicts with sensitive biologic, cultural, and scenic resources that require protection. This potential conflict is one of the major problems addressed in this plan.

The California Desert Conservation Area is well-endowed with energy and mineral resources. As of August, 1979, 19,802 unpatented mining claims in the CDCA were filed with BLM. There are an additional 1,941 patented claims in the CDCA. Forty-four commodities are known to occur in amounts considered to be economically significant. For some of these, the largest deposits in the United States are in the California Desert Conservation Area; the Mountain Pass rare earth deposit and borates at Boron are examples. Eighteen of these commodities will probably become increasingly important to both the national and local economy, a prediction based on supply and demand trends and net import versus domestic production deficits. Known reserves and resources of these 18 commodities in the Conservation Area are valued at approximately $135 billion, before extraction. Considering the large potential for undiscovered resources of these and other commodities, the total in-place value of the energy and mineral estate is probably several hundred billion dollars. This estimate underscores the importance of managing energy and mineral resources in harmony with other resources to permit, where necessary, their use and development under workable constraints.

Exploration and development includes a variety of activities whose effects on the land range from none to very significant. Exploration requires access to large amounts of land, but impacts are usually negligible. If potential for a mineral deposit is found, then development and extraction may occur, causing impacts ranging from moderate to severe but affecting only small tracts of land. As a basis for perspective, the U.S. Bureau of Mines estimates that only 0.18 percent of all public land in the western United States has been affected in some way by exploration and development in the last 150 years.

The availability of land for exploration and development activities is a crucial factor for finding a new mineral deposit. Table M-1 lists land status categories which are presently withdrawn from all mining (national monuments, military withdrawals, and protective withdrawals), or segregated from U.S. mining laws (closed to locatables only). It is assumed that these withdrawals and segregations will remain in effect for the life of this plan. Private lands where mineral rights are presumably privately owned are also shown.

Table M-1 also shows that 45 percent of the California Desert Conservation Area consists of BLM-administered lands that are now open to exploration and development. This represents 95 percent of all BLM-administered lands within the CDCA.

Table M-1

PRESENT (1979) AVAILABILITY OF LANDS IN THE CALIFORNIA DESERT CONSERVATION AREA FOR MINERAL EXPLORATION AND DEVELOPMENT

Lands Available

Type	Acres (000,000)	Percent of CDCA
Private and State Lands[a]	6.487	25
BLM-administered Lands	11.543	45
Total	18.030	70

Lands Unavailable

Type	Acres (000,000)	Percent of CDCA
BLM-administered Lands	.806	3
Military Lands	2.998	12
National Monuments	2.497	10
State Parks	.938	4
Metropolitan Water District	.075	< 1
Los Angeles Water and Power	.152	< 1
Patented Lands with Minerals Reserved by U. S. Government	.066	< 1
Total	7.532	30

[a] Mineral rights are privately or state owned and subject to state and local laws.

Energy and mineral resources are legally and administratively divided into three groups:

1) **Locatables**
2) **Leasables**
3) **Saleables**

- Locatable minerals are governed under the 1872 Mining Law, which permits individuals to locate a claim for a valuable mineral on any public land not specifically withdrawn or segregated from the mining laws. Locatables include all metallic minerals and some non-metallic commodities. Locatable energy resources include uranium, thorium, and lithium.

- Leasables include oil, gas, and geothermal resources (energy), as well as sodium and potassium. The Federal Government, at its discretion, may lease the rights to recover these commodities on specific parcels of land and for a specific time.

- Saleables include materials of a common variety such as sand and gravel, stone, clay, and cinders. At its discretion, the Federal Government may contract to sell a certain amount of one of these commodities from a specific parcel of land to an individual who may then remove the commodity for his own purposes.

National and State laws recognize that it is in the public interest to foster and encourage exploration, development, and extraction of domestic energy and mineral resources. Responding to this need and the importance of the California Desert Conservation Area as a source of energy and mineral resources, the BLM will make available for exploration and development as much land in the Conservation Area as possible. Exploration and development may take place in most parts of the desert, provided precautions are taken to protect sensitive biologic, cultural, and scenic resources where these are present. Precautions will be consistent with existing Federal and State laws, BLM regulations, and multiple use class guidelines. The BLM will work cooperatively with individuals engaged in exploration and development to minimize conflicts and impacts resulting from these activities.

No plan provision will affect the applicability of the United States mining laws on public lands within the California Desert Conservation Area. However, all mining claims, leases, and material sales permits will be subject to such reasonable regulations as the Secretary of the Interior may prescribe, such as proposed regulations 43 CFR 3809 which govern surface management of claims for locatable minerals.

Under the 1872 Mining Law, exploration and development of locatable minerals is a non-discretionary action. However, under surface management regulations such as the proposed 43 CFR 3809 regulations, BLM and U.S. Geological Survey may place reasonable controls on such operations.

- Leasables and Saleables. Unlike locatables, both mineral leasing and sales are done at the discretion of BLM and are therefore considered together in this element.

APPROACH

The exploration and development element is presented in two components: 1) Locatable Minerals and, 2) Leasable and Saleable Minerals.

- Locatables. At least 6,627,000 acres of the CDCA are considered to have potential for locatable minerals. Within this area, 1,454,000 acres are considered to have potential for the energy minerals, uranium, thorium, and lithium - the "energy fraction".

This estimate is based on data on known deposits, past production, verification studies, geochemical anomalies, and airborne gamma ray spectrometer and magnetometer anomalies. Because data are lacking in certain areas, this estimate should be taken as a minimum value. The areas of locatable mineral potential are shown on the Locatable Potential Mineral Exploration and Development Element Map. Tables M-3, M-5, M-7 and M-9 show the amount of area of potential in each class, and relative percentages of the total potential area for each plan alternative.

The U.S. Geological Survey Conservation Division has classified the potential for leasable minerals in the CDCA as valuable or prospectively valuable for sodium and/or potassium, potential and known geothermal resource areas, and potential or known geologic structures for oil and gas.

Saleables such as sand, gravel, and building stone occur throughout the CDCA. Almost any area has some potential for saleables. Therefore, only past and present extraction areas are considered in this element.

The Mineral Exploration and Development Element Map -- Leasables and Saleables -- show areas of potential for all leasables, including an "energy fraction" (geothermal, oil and gas), and saleable extraction areas. Tables M-2, M-4, M-6 and M-8 indicate the amount of area of potential in each class, and relative percentage of the total potential area.

IMPLEMENTATION ASSUMPTIONS

Exploration and development in the CDCA shall be managed according to existing Federal regulations and new regulations such as those proposed for surface management on claims for locatable minerals (43 CFR 3809, Appendix 1). Discretionary decisions allowed under these regulations shall be based on multiple use class guidelines as follows:

Class C: No new permits, leases, or material sales contracts will be issued. Exploration and development under valid existing rights shall continue under strict regulations to protect against unnecessary impairment of wilderness suitability.

Class L: Permits, leases and material sales contracts will be issued subject to findings of an EA or EIS. In the case of leasable energy sources such as geothermal, which require on site power generation plants, a plan amendment must first be processed to change the area to Class M or I prior to approval of plant siting.

Classes M and I: Exploration and development activities will be allowed subject to basic environmental restrictions and mitigation requirements.

More specific details are contained in the multiple use guidelines.

Furthermore, management of energy and mineral exploration and development must be consistent with the California Surface Mining and Reclamation Act of 1975 (SMARA). This Act requires that mining and reclamation plans be filed with the appropriate county agency for all operations that will remove more than 1,000 cubic yards of material or affect more than one acre of land at any one site.

The BLM will enter into cooperative agreements with State and county agencies to determine jurisdiction over exploration and development on public lands in the California Desert Conservation Area.

MONITORING

Monitoring efforts will be designed to assess impacts of exploration and development of various types of minerals operations in varying representative environments. Effectiveness of mitigation prescription assessment will be a major objective.

It will be possible to set up intensive monitoring on only a few carefully selected operations. Priority will be given to monitoring impacts and mitigation effectiveness in Class L areas where protection of sensitive resources is a primary concern. Initial selection will be targeted to obtain an analysis of at least one hard rock locatable operation, one oil and gas or geothermal leasable operation, and one material sales site (e.g., a county or State aggregate material operation in Class L).

Implementation of monitoring is subject to the development of an active operation suitable for monitoring in an area of sensitive resource interest. It is anticipated that there will be opportunities to implement such monitoring within the first five years of plan approval.

Plan Alternatives

MINERAL EXPLORATION AND DEVELOPMENT

● NO ACTION ALTERNATIVE ●

Relationship to Issues

The No Action Alternative depicts the CDCA as it is presently managed by BLM with respect to mineral exploration and development. Mineral leasing and material sales will continue to be processed on a case-by-case basis.

Objective

To continue present practices and procedures for the exploration and development of energy and mineral resources in areas not yet restricted or withdrawn.

Element Components

Tables M-2 and M-3 show how the mineral potential of the California desert is presently managed.

Table M-2

NO ACTION ALTERNATIVE
DISTRIBUTION OF LEASABLE ENERGY AND MINERAL POTENTIAL
AND SALEABLES BY MULTIPLE USE CLASS EQUIVALENT
AND LAND STATUS

	Leasables						Saleables		
	Total Potential			Energy Fraction[a]			Extraction Areas[b]		
Multiple Use Class or Land Status	Acres (000)	Percent (BLM Lands)	Percent (CDCA)	Acres (000)	Percent (BLM Lands)	Percent (CDCA)	Acres (000)	Percent (BLM Lands)	Percent (CDCA)
C									
L	1,482	30	14	1,378	33	15	192	39	29
M	2,919	60	29	2,403	58	27	258	52	39
I	497	10	5	398	9	5	45	9	7
Private and State Lands	2,522		25	2,362		27	136		21
Unavailable[c]	2,788		27	2,255		26	29		4
Total	10,207	100	100	8,796	100	100	660	100	100

[a] Portion of total potential which has oil and gas and/or geothermal resources. Other leasables may also be present.

[b] Based on known present or historic extraction sites.

[c] Unavailable lands are shown on Table M-1.

Table M-3

NO ACTION ALTERNATIVE
DISTRIBUTION OF LOCATABLE ENERGY AND MINERAL
POTENTIAL BY MULTIPLE USE CLASS EQUIVALENT
AND LAND STATUS

	Locatables					
	Total Potential			Energy Fraction[a]		
Multiple Use Class or Land Status	Acres (000)	Percent (BLM Lands)	Percent (CDCA)	Acres (000)	Percent (BLM Lands)	Percent (CDCA)
C						
L	1,901	40	29	321	19	22
M	2,476	51	37	533	32	32
I	419	9	6	81	49	6
Private and State Lands	518		8	276		19
Unavailable[b]	1,313		20	243		17
Total	6,627	100	100	1,454	100	100

[a] Portion of total potential for uranium, thorium or lithium resources. Other locatable minerals may also be present.

[b] Unavailable lands are shown on Table M-1.

● PROTECTION ALTERNATIVE ●

Relationship to Issues

Under the Protection Alternative, mineral exploration and development is limited in favor of protection of scenic, cultural, biological and ecological resources.

Objective

To provide opportunity for mineral exploration and development under the most stringent feasible constraints required to minimize impact in the environment and sensitive resources.

Element Components

Tables M-4 and M-5 depict the relationship between potential for locatable, leasable, and saleable minerals and the multiple use classes C, L, M and I. The high percentage of land in classes C and L results in mineral activity being constrained over much of the desert, in keeping with the objective of this alternative.

Constraints applied are principally procedural, as detailed in the Multiple Use Guidelines and Conflict Resolution Criteria. Basic controls are accomplished through plans for exploration and development filed with USGS, in the case of leasables, and BLM, in the case of locatables and saleables. In classes C and L, most surface-disturbing actions will require the filing of an EIS, with subsequent stipulations and mitigation requirements based on EIS findings. Class M and I operations will be subjected to more limited environmental assessments.

Table M-4

PROTECTION ALTERNATIVE
DISTRIBUTION OF LEASABLE ENERGY AND MINERAL POTENTIAL
AND SALEABLES BY MULTIPLE USE CLASS
AND LAND STATUS

	Leasables						Saleables		
	Total Potential			Energy Fraction[a]			Extraction Areas[b]		
Multiple Use Class or Land Status	Acres (000)	Percent (BLM Lands)	Percent (CDCA)	Acres (000)	Percent (BLM Lands)	Percent (CDCA)	Acres (000)	Percent (BLM Lands)	Percent (CDCA)
C	1,793	36	18	1,495	34	17	111	23	17
L	2,718	54	27	2,470	57	28	354	72	54
M	341	7	3	259	6	3	12	2	2
I	177	3	2	150	3	2	14	3	2
Private and State Lands	2,390		23	2,167		24	140		21
Unavailable[c]	2,788		27	2,255		26	29		4
Total	10,207	100	100	8,796	100	100	660	100	100

[a] Portion of total potential which has oil and gas and/or geothermal resources. Other leasables may also be present.

[b] Based on known present or historic extraction sites.

[c] Unavailable lands are shown on Table M-1.

"Legitimate mining should be conducted so as to minimize long-term advers impacts on desert resources. Reclamation has to be part of the operation."

Table M-5

PROTECTION ALTERNATIVE
DISTRIBUTION OF LOCATABLE ENERGY AND MINERAL
POTENTIAL BY MULTIPLE USE CLASS
AND LAND STATUS

	Locatables					
	Total Potential			Energy Fraction[a]		
Multiple Use Class or Land Status	Acres (000)	Percent (BLM Lands)	Percent (CDCA)	Acres (000)	Percent (BLM Lands)	Percent (CDCA)
C	2,308	47	35	484	44	33
L	2,252	45	33	531	48	37
M	319	6	5	61	6	4
I	117	2	2	22	2	1
Private and State Lands	318		5	113		8
Unavailable[b]	1,313		20	243		17
Total	6,627	100	100	1,454	100	100

[a] Portion of total potential which has uranium, thorium, or lithium resources. Other locatable minerals may also be present.

[b] Unavailable lands are shown on Table M-1.

● BALANCED ALTERNATIVE ●

Relationship to Issues

The Balanced Alternative attempts to find a workable "middle ground" that balances protection of sensitive resources with production and use of mineral resources.

Objective

To provide reasonable opportunities for exploration and development of mineral resources, controlled so as to reduce and avoid environmental change and conflict with other resource uses.

Element Components

Tables M-6 and M-7 depict the relationship between mineral potential and the multiple use class guidelines governing the exploration and development of mineral resources.

As in the Protection Alternative, the constraints applied are principally procedural, through plans of exploration and development filed with USGS or BLM. However, the proportion of mineral potential subject to the routine environmental assessment and basic protection mitigation measures of classes M and I is more in balance with the C and L class areas, which generally require EIS filing and more stringent environmental protection constraints on exploration and development.

Table M-6

BALANCED ALTERNATIVE
DISTRIBUTION OF LEASABLE ENERGY AND MINERAL POTENTIAL
AND SALEABLES BY MULTIPLE USE CLASS
AND LAND STATUS

	Leasables						Saleables		
	Total Potential			Energy Fraction[a]			Extraction Areas[b]		
Multiple Use Class or Land Status	Acres (000)	Percent (BLM Lands)	Percent (CDCA)	Acres (000)	Percent (BLM Lands)	Percent (CDCA)	Acres (000)	Percent (BLM Lands)	Percent (CDCA)
C	380	8	4	343	8	4	17	3	3
L	1,941	41	19	1,735	42	20	275	55	42
M	2,176	45	21	1,900	45	21	181	37	27
I	267	6	3	195	5	2	24	5	4
Private and State Lands	2,655		26	2,368		27	134		20
Unavailable[c]	2,788		27	2,255		26	29		4
Total	10,207	100	100	8,796	100	100	660	100	100

[a] Portion of total potential which has oil and gas and/or geothermal resources. Other leasables may also be present

[b] Based on known present or historic extraction sites.

[c] Unavailable lands are shown on Table M-1.

"Mining is part of the deserts economy, its history, its people, and sometimes its scenery."

Table M-7

BALANCED ALTERNATIVE – DISTRIBUTION OF LOCATABLE ENERGY
AND MINERAL POTENTIAL BY MULTIPLE USE CLASS
AND LAND STATUS

	Total Potential			Energy Fraction[a]		
Multiple Use Class or Land Status	Acres (000)	Percent (BLM Lands)	Percent (CDCA)	Acres (000)	Percent (BLM Lands)	Percent (CDCA)
C	783	16	12	106	10	7
L	2,273	46	34	500	46	34
M	1,589	32	24	428	39	30
I	267	6	4	56	5	4
Private and State Lands	402		6	121		8
Unavailable[b]	1,313		20	243		17
Total	6,627	100	100	1,454	100	100

[a] Portion of total potential which has uranium, thorium or lithium resources. Other locatable minerals may also be present.

[b] Unavailable lands are shown on Table M-1.

● USE ALTERNATIVE ●

Relationship to Issues

Under the Use Alternative, priority is given to mineral exploration and development, subject to minimal legal requirements for protection of sensitive resources.

Objective

To provide the maximum opportunity for exploration and development of all mineral resources while meeting minimal legal requirements for protection of sensitive resources.

Element Components

Tables M-8 and M-9 depict the relationship between mineral potential and the multiple use class governing their development. While the same procedural constraints on mineral exploration and development apply by multiple use class, the class distribution is significantly shifted so that the predominance of mineral potential falls in classes M and I, subject to routine environmental assessment. Exploration and development plans must still be filed with USGS or BLM as appropriate, but protective requirements and mitigation measures will usually be those now commonly used in modern mineral operations.

Table M-8

USE ALTERNATIVE
DISTRIBUTION OF LEASABLE ENERGY AND MINERAL POTENTIAL
AND SALEABLES BY MULTIPLE USE CLASS
AND LAND STATUS

	Leasables						Saleables		
	Total Potential			Energy Fraction[a]			Extraction Areas[b]		
Multiple Use Class or Land Status	Acres (000)	Percent (BLM Lands)	Percent (CDCA)	Acres (000)	Percent (BLM Lands)	Percent (CDCA)	Acres (000)	Percent (BLM Lands)	Percent (CDCA)
C	90	2	1	87	2	1	13	3	2
L	545	12	5	472	12	5	28	6	4
M	3,197	67	32	2,752	67	31	392	78	60
I	909	19	9	799	19	9	68	13	10
Private and State Lands	2,678		26	2,451		28	130		20
Unavailable[c]	2,788		27	2,255		26	29		4
Total	10,207	100	100	8,796	100	100	660	100	100

[a] Portion of total potential which has oil and gas and/or geothermal resources. Other leasables may also be present.

[b] Based on known present or historic extraction sites.

[c] Unavailable lands are shown on Table M-1.

> "It is not reasonable to ignore, nor to wish away, the fact that minerals must be mined where they are - and where they are is frequantly scenic."

Table M-9

USE ALTERNATIVE
DISTRIBUTION OF LOCATABLE ENERGY AND MINERAL
POTENTIAL BY MULTIPLE USE CLASS
AND LAND STATUS

	Total Potential			Energy Fraction[a]		
Multiple Use Class or Land Status	Acres (000)	Percent (BLM Lands)	Percent (CDCA)	Acres (000)	Percent (BLM Lands)	Percent (CDCA)
C	152	3	2	3	< 1	< 1
L	841	18	13	171	18	12
M	3,035	64	46	678	72	47
I	696	15	10	95	10	6
Private and State Lands	590		9	264		18
Unavailable[b]	1,313		20	243		17
Total	6,627	100	100	1,454	100	100

[a] Portion of total potential which has uranium, thorium, or lithium resources. Other locatable minerals may also be present.

[b] Unavailable lands are shown on Table M-1.

Although legally permissible unless formally withdrawn or segregated from the mining law, exploration and development for locatables is stringently restricted under the guidelines for classes C and L. Under the environmental protection requirements of the class guidelines, exploration and development will be tightly controlled. Exploration and development of leasables and saleables is not allowed in Class C and tightly controlled in Class L.

Exploration and development of locatables, leasables, and saleables is generally subject to only moderate controls in classes M and I, and normal operations will not be significantly constrained.

Table M-10 summarizes and compares the effects of the four alternatives on mineral exploration and development. Mineral potential in acres within multiple use classes M and I are combined as a "moderate controls" category. Mineral potential within classes C and L are combined as subject to "stringent restrictions". These categories are useful in understanding the relative impacts of the alternatives on exploration and production of mineral resources.

Table M-10 shows that over 3.7 million acres (79 percent) of locatable mineral potential is favorably classified (M and I) for exploration and development in the Use Alternative, whereas, in the Protection Alternative only 436,000 acres or 8 percent of this potential falls in classes M and I. The relative spread between the Use and the Protection Alternatives for leasable and saleable minerals is about the same. In the Balanced Alternative, 38 percent of locatable mineral potential, 51 percent of leasable potential and 42 percent of saleables fall within the M and I classes.

Table M-10

COMPARISON OF MULTIPLE USE CLASSIFICATION
OF TOTAL LOCATABLE, LEASABLE AND SALEABLE POTENTIAL
FOR EACH ALTERNATIVE

	No Action Alternative		Protection Alternative		Balanced Alternative		Use Alternative	
	Acres (000)	Percent[a]	Acres (000)	Percent	Acres (000)	Percent	Acres (000)	Percent
Locatables								
Moderate[b] Controls	2,895	60	436	8	1,856	38	3,731	79
Stringent[c] Restrictions	1,901	40	4,560	92	3,056	62	993	21
Total	4,796	100	4,996	100	4,912	100	4,724	100
Leasables								
Moderate Controls	3,416	70	518	10	2,443	51	4,106	86
Stringent Restrictions	1,482	30	4,511	90	2,321	49	635	14
Total	4,898	100	5,029	100	4,764	100	4,741	100
Saleables[d]								
Moderate Controls	303	61	26	5	205	42	460	91
Stringent Restrictions	192	39	465	95	292	58	41	9
Total	495	100	491	100	497	100	501	100

[a] Percent of total BLM-Administered Lands (12,131,000 acres).

[b] Moderate Controls are the sum of Classes M and I.

[c] Stringent Restrictions are the sum of Classes C and L.

[d] Saleables based on known current or historic extraction sites.

CALIFORNIA DESERT CONSERVATION AREA

Mineral Exploration & Development
leasable / saleable

LEASEABLES INCLUDE OIL, GAS, AND GEOTHERMAL RESOURCES (ENERGY), AS WELL AS SODIUM AND POTASSIUM. THE FEDERAL GOVERNMENT, AT IT'S DISCRETION, MAY LEASE THE RIGHTS TO RECOVER THESE COMMODITIES ON SPECIFIC PARCELS OF LAND AND FOR A SPECIFIC TIME.

SALEABLES INCLUDE MATERIALS OF A COMMON VARIETY SUCH AS SAND AND GRAVEL, STONE, CLAY, AND CINDERS. AT IT'S DISCRETION, THE FEDERAL GOVERNMENT MAY CONTRACT TO SELL A CERTAIN AMOUNT OF ONE OF THESE COMMODITIES FROM A SPECIFIC PARCEL OF LAND TO AN INDIVIDUAL WHO MAY THEN REMOVE THE COMMODITY FOR HIS OWN PURPOSES.

– legend –

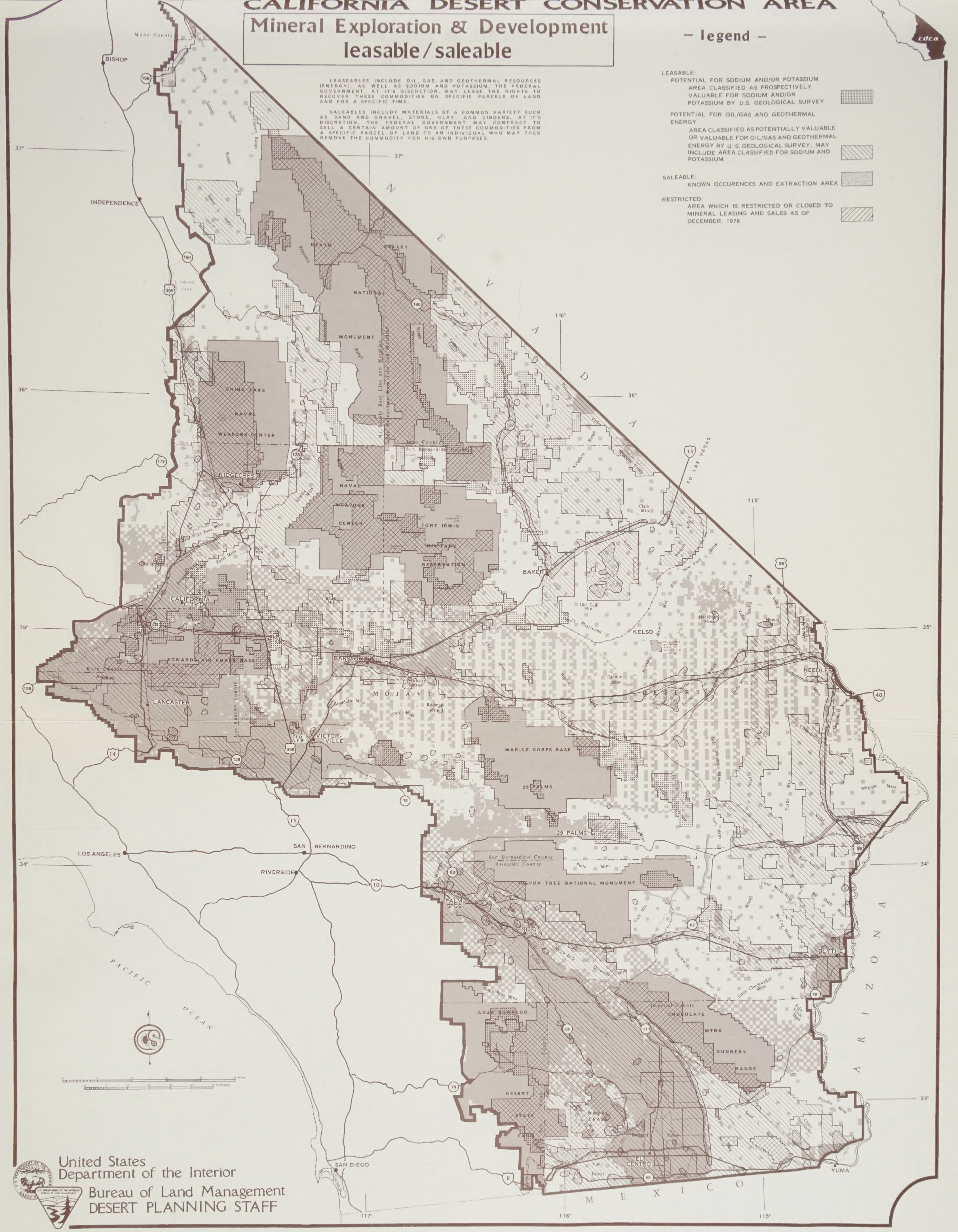
LEASABLE:

POTENTIAL FOR SODIUM AND/OR POTASSIUM
AREA CLASSIFIED AS PROSPECTIVELY VALUABLE FOR SODIUM AND/OR POTASSIUM BY U.S. GEOLOGICAL SURVEY ▦

POTENTIAL FOR OIL/GAS AND GEOTHERMAL ENERGY
AREA CLASSIFIED AS POTENTIALLY VALUABLE OR VALUABLE FOR OIL/GAS AND GEOTHERMAL ENERGY BY U.S. GEOLOGICAL SURVEY. MAY INCLUDE AREA CLASSIFIED FOR SODIUM AND POTASSIUM ▧

SALEABLE:
KNOWN OCCURENCES AND EXTRACTION AREA ░

RESTRICTED:
AREA WHICH IS RESTRICTED OR CLOSED TO MINERAL LEASING AND SALES AS OF DECEMBER, 1978 ▨


cdca
Mono County
BISHOP
37°
INDEPENDENCE
NEVADA
DEATH VALLEY NATIONAL MONUMENT
CHINA LAKE NAVAL WEAPONS CENTER
RIDGECREST
NAVAL WEAPONS CENTER
FORT IRWIN MILITARY RESERVATION
Inyo County
San Bernardino County
36°
116°
115°
TO LAS VEGAS
BAKER
KELSO
CALIFORNIA CITY
EDWARDS AIR FORCE BASE
Kern County
Los Angeles County
LANCASTER
BARSTOW
MOJAVE DESERT
GEO. A.F.B.
VICTORVILLE
MARINE CORPS BASE
29 PALMS
NEEDLES
35°
SAN BERNARDINO
LOS ANGELES
RIVERSIDE
34°
San Bernardino County
Riverside County
JOSHUA TREE NATIONAL MONUMENT
PALM SPGS
INDIO
BLYTHE
ARIZONA
PACIFIC OCEAN
Imperial County
CHOCOLATE MTNS GUNNERY RANGE
ANZA BORREGO DESERT STATE PARK
EL CENTRO
SAN DIEGO
YUMA
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MEXICO
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116°
115°

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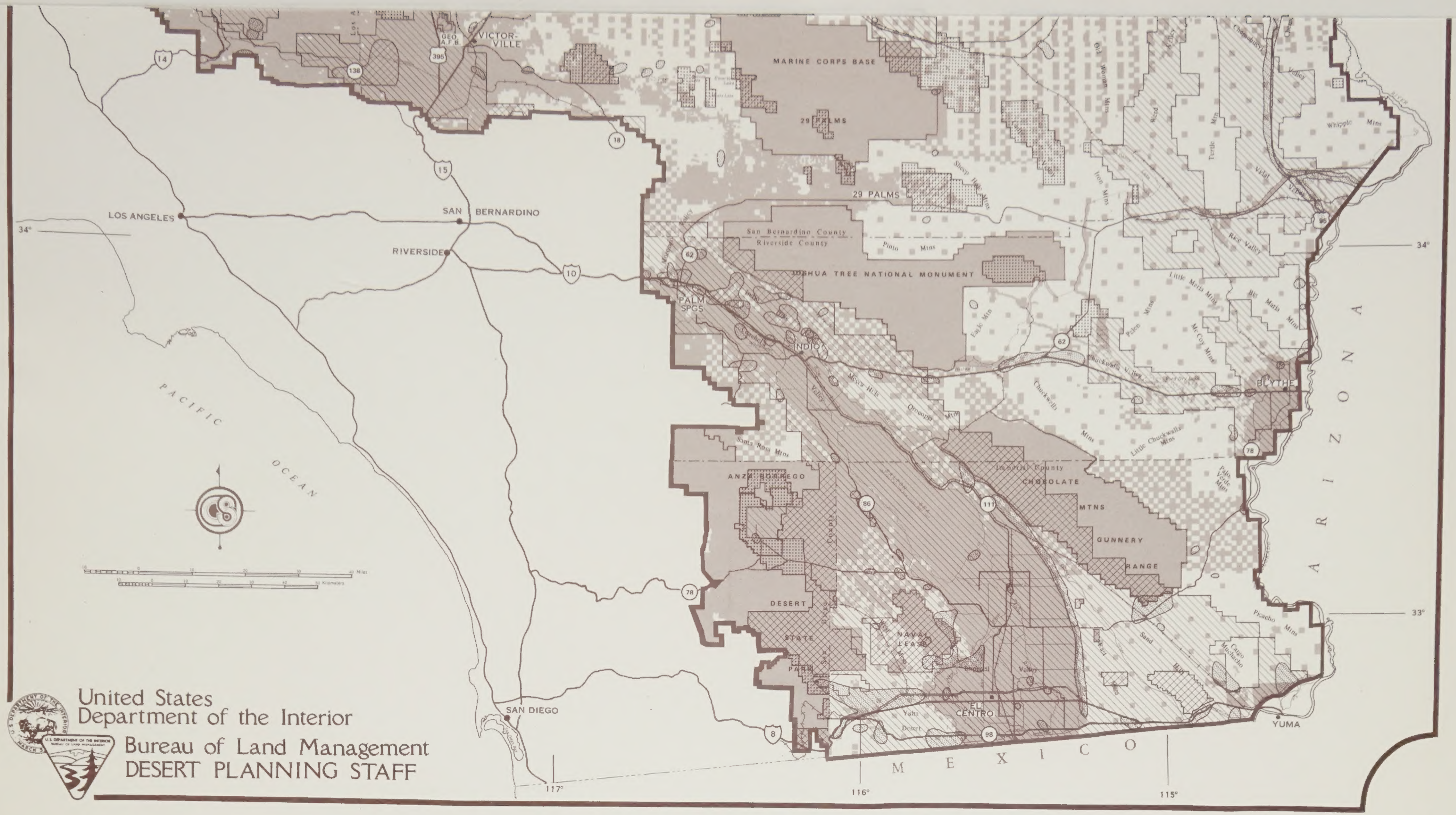
MARINE CORPS BASE
29 PALMS
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GEO A.F.B.
LOS ANGELES
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RIVERSIDE
SAN DIEGO
PALM SPGS
INDIO
BLYTHE
EL CENTRO
YUMA
San Bernardino County
Riverside County
Imperial County
JOSHUA TREE NATIONAL MONUMENT
ANZA BORREGO
DESERT
STATE
PARK
NAVAL LEASE
CHOCOLATE
MTNS
GUNNERY
RANGE
Whipple Mtns
Turtle Mtn
Old Woman Mtns
Iron Mtns
Sheep Hole Mtns
Pinto Mtns
Eagle Mtn
Palen Mtns
Little Maria Mtns
Big Maria Mtns
McCoy Mtns
Chuckwalla Valley
Chuckwalla Mtns
Little Chuckwalla Mtns
Palo Verde Mtns
Orocopia Mtns
Mecca Hills
Santa Rosa Mtns
Picacho Mtns
Cargo Muchacho
Sand Hills
Rice Valley
Vidal
Yuha Desert
Imperial Valley
A R I Z O N A
M E X I C O
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138
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Miles
Kilometers

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CALIFORNIA DESERT CONSERVATION AREA

Mineral Exploration & Development
locatable

LOCATABLE MINERALS ARE GOVERNED UNDER THE 1872 MINING LAW WHICH PERMITS INDIVIDUALS TO LOCATE A CLAIM FOR A VALUABLE MINERAL ON ANY PUBLIC LAND NOT SPECIFICALLY WITHCRAWN OR SEGREGATED FROM THE MINING LAWS. LOCATABLES INCLUDE ALL METALLIC MINERALS AND SOME NON-METALLIC COMMODITIES. LOCATABLE ENERGY RESOURCES INCLUDE URANIUM, THORIUM, AND LITHIUM.

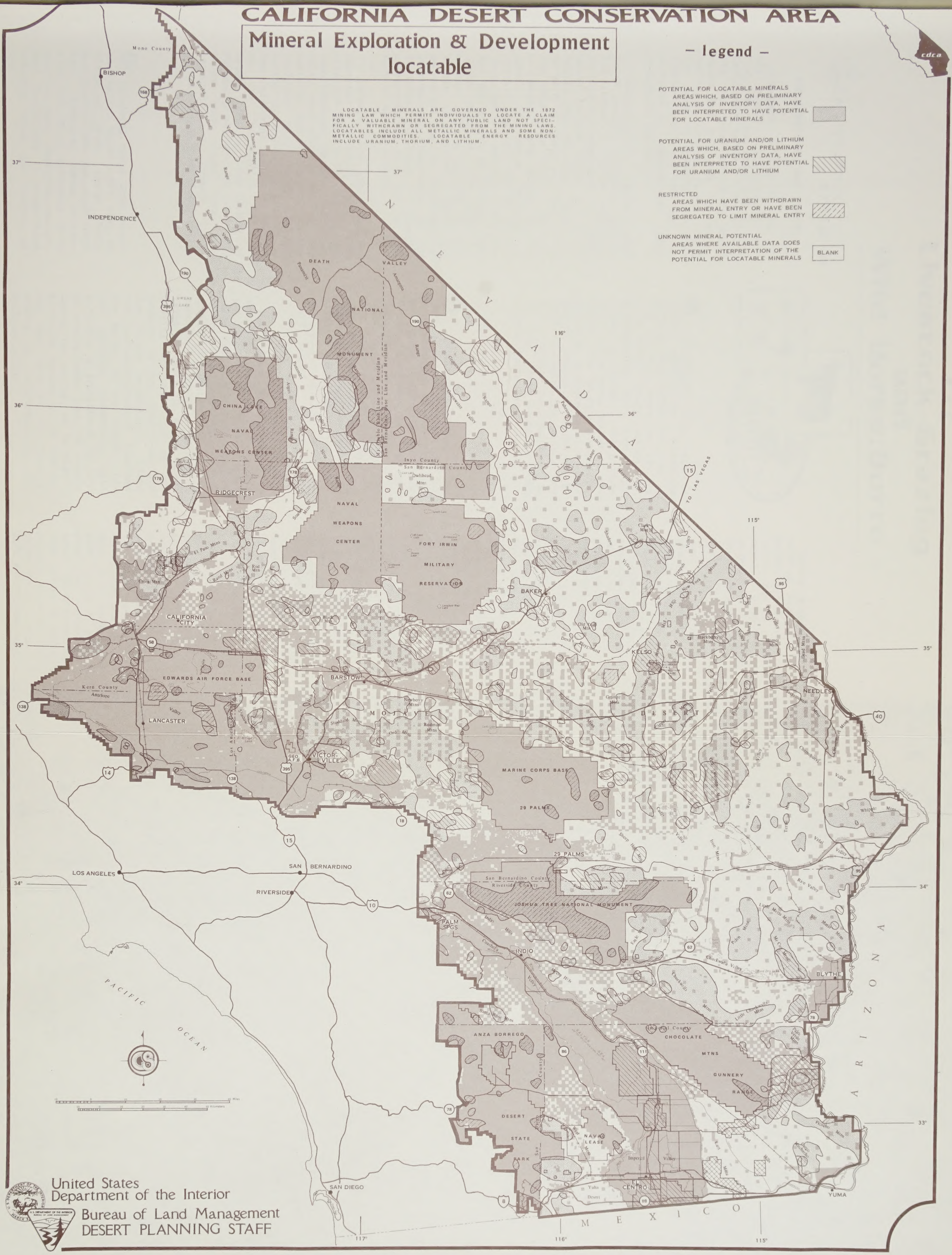
– legend –

POTENTIAL FOR LOCATABLE MINERALS
AREAS WHICH, BASED ON PRELIMINARY ANALYSIS OF INVENTORY DATA, HAVE BEEN INTERPRETED TO HAVE POTENTIAL FOR LOCATABLE MINERALS ▒

POTENTIAL FOR URANIUM AND/OR LITHIUM
AREAS WHICH, BASED ON PRELIMINARY ANALYSIS OF INVENTORY DATA, HAVE BEEN INTERPRETED TO HAVE POTENTIAL FOR URANIUM AND/OR LITHIUM ▧

RESTRICTED
AREAS WHICH HAVE BEEN WITHDRAWN FROM MINERAL ENTRY OR HAVE BEEN SEGREGATED TO LIMIT MINERAL ENTRY ▨

UNKNOWN MINERAL POTENTIAL
AREAS WHERE AVAILABLE DATA DOES NOT PERMIT INTERPRETATION OF THE POTENTIAL FOR LOCATABLE MINERALS BLANK


cdca
Mono County
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168
37°
INDEPENDENCE
190
395
DEATH
VALLEY
NATIONAL
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CHINA LAKE
NAVAL
WEAPONS CENTER
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RIDGECREST
127
Inyo County
San Bernardino County
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TO LAS VEGAS
NAVAL
WEAPONS
CENTER
FORT IRWIN
MILITARY
RESERVATION
115°
BAKER
95
CALIFORNIA CITY
35°
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KELSO
EDWARDS AIR FORCE BASE
Kern County
BARSTOW
NEEDLES
138
LANCASTER
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MOJAVE
DESERT
VICTORVILLE
GEO A.F.B.
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MARINE CORPS BASE
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29 PALMS
LOS ANGELES
SAN BERNARDINO
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RIVERSIDE
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San Bernardino County
Riverside County
JOSHUA TREE NATIONAL MONUMENT
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PALM SPGS
INDIO
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BLYTHE
PACIFIC
OCEAN
ANZA BORREGO
Imperial County
CHOCOLATE
MTNS
GUNNERY
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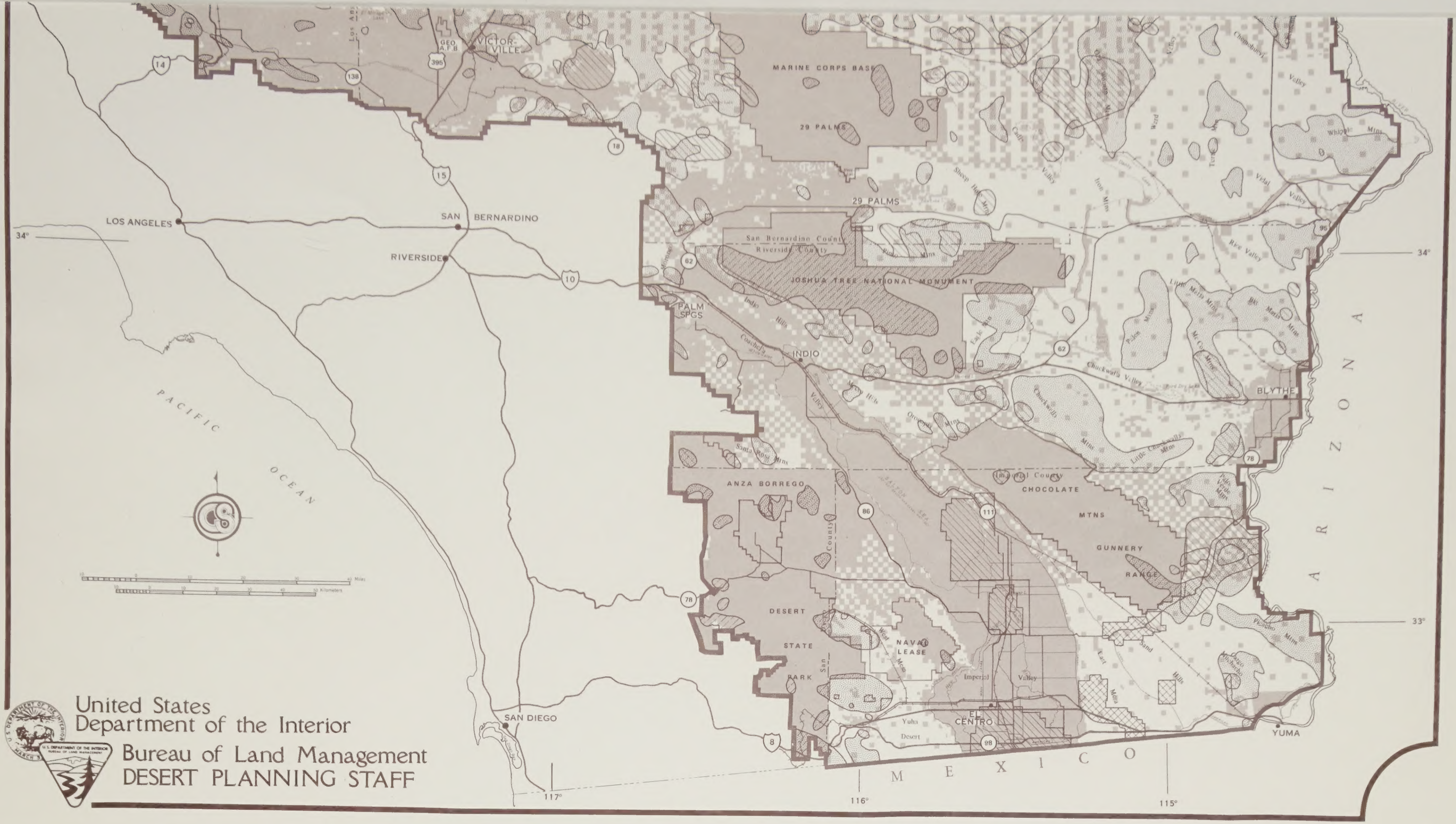
VICTORVILLE
GEO AFB
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RIVERSIDE
SAN DIEGO
PALM SPGS
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BLYTHE
EL CENTRO
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RANGE
Salton Sea
Chuckwalla Valley
Chuckwalla Mtns
Little Chuckwalla Mtns
Palen Mtns
Little Maria Mtns
Big Maria Mtns
McCoy Mtns
Rice Valley
Vidal Valley
Whipple Mtns
Chemehuevi Valley
Iron Mtns
Sheep Hole Mtns
Cadiz Valley
Ward Valley
Turtle Mtns
Pinto Mtns
Eagle Mtns
Indio Hills
Coachella Valley
Mecca Hills
Orocopia Mtns
Santa Rosa Mtns
Palo Verde Mtns
Picacho Mtns
Chocolate Mtns
East Mesa
Sand Hills
West Mesa
Imperial Valley
Yuha Desert
San Diego County
PACIFIC OCEAN
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C-7
Livestock Grazing and Wild Horse/Burro

Ⓐ ● LIVESTOCK GRAZING ●

BACKGROUND and ISSUES

Livestock grazing is one of the oldest introduced commercial uses now occurring in the California desert. The vitality of this activity, which dates back more than 100 years, continues largely because forage used by domestic animals renews itself and may even be enhanced by appropriate range management practices.

Currently, 4.5 million acres in 54 grazing allotments are being leased to cattle and sheep interests. Approximately 60,000 sheep (40,000 AUMs) and 10,000 cattle (120,000 AUMs) obtain all or part of their sustenance from the California Desert (an AUM, or animal unit month, is the amount of forage required to sustain one cow, or its equivalent, for one month; or 990 lbs. air dry weight of forage. Each sheep requires 1/5 AUM per month). Sheep grazing is generally intermittent, while use by cattle may be continuous or intermittent, depending on the locality and type of ranching operation, as well as the pattern of annual rainfall.

Existing use practices are dictated primarily by such climatic factors as season and precipitation amount within the CDCA, and secondarily by the cultural and settlement characteristics that have developed during the history of grazing in the California desert. Because of the variability in the amount, quality, and timing of forage production in the CDCA, three range types have been identified to manage desert grazing leases more effectively:

❶ Ephemeral range type occurs in regions below 3,500 feet in elevation where annual forbs and grasses are the major forage. Ephemeral forage production can vary extremely from year to year, requiring management flexibility in prescribing stocking rates and seasons of use.

❷ Perennial range type is found usually at elevations greater than 3,500 feet, or in the northern portions of the CDCA where woody shrubs and bunchgrasses are the major livestock forage. The production and growing season of the forage type is more consistent, allowing an estimate of average annual production which can be used to establish allocations which require no adjustments in stocking rates, except in very extreme conditions.

❸ Ephemeral/perennial range type is an intermediate type or a combination of the previous two types. Grazing of this forage is managed by first establishing a stocking rate based on perennial forage and then annually increasing that rate according to how well the ephemeral forage responds to climatic conditions.

Most sheep grazing occurs on ephemeral range in the western portions of the Mojave Desert where fall and winter precipitation often produces a rich growth of winter and spring annuals, although, in about three of every ten years, sheep grazing may not occur at all because of dry conditions and low forage production. Lambs are characteristically finished for market in the desert. Local climatic conditions will influence a traditional pattern of moving lambs into the desert during the spring, on to higher elevation ranges in the summer, and then back to the central valley of California in the fall and winter.

Cattle grazing generally occurs at higher elevations, in areas with higher precipitation (above six to eight inches per year). Perennial plant cover provides a major part of the forage supply. Use is seasonal in the northern Mojave and normally year-round in the southwest and eastern Mojave, although seasonal use, based on annual forage availability, is also practiced. Unlike sheep operators, cattle ranchers are permanent residents of long standing. Their operations represent perhaps the oldest persistent settlements in the California desert.

Both the acreage and intensity of livestock grazing in the California desert has continually declined during this century. Lands formerly grazed on the western edge of the desert have passed into private ownership and are no longer available for public leases or permits. In recent years recreational use, particularly that of off-road vehicles, has further impacted range on the western fringe, resulting in additional livestock management problems and decreasing forage production potential. The rapid expansion of wild horse and burro populations since their protection under the Wild Horse and Burro Act of 1971 has caused intense conflicts for forage in some areas. In addition, unwise grazing practices in limited areas of the CDCA have reduced carrying capacity to less than that of presettlement times.

While grazing by cattle and sheep is an historic use in the California desert and public opinion polls have indicated little public opposition to domestic livestock grazing on the desert, this activity is a matter of controversy in some scientific disciplines. While most will agree properly managed levels of grazing are appropriate, considerable divergence of opinion exists as to what levels of grazing are compatible with the protection of other values, especially wildlife and archaeological values.

This conflict is most apparent at the site of riparian systems, which, because of the presence of water, vegetation, and shelter, tend to be used heavily by livestock and wildlife. Intense use not only degrades the quality of the riparian area, but also destroys the artifacts and other evidence of early man who also congregated in such areas. Elsewhere, the Desert Tortoise, listed as a sensitive species by the BLM, competes with livestock for available forage and space where high concentrations of tortoise and livestock occur in the same area.

As mentioned above, the competition for forage by wild horses and burros is a significant problem. This is discussed in more detail in the second section of this element. Desert spring floral blooms are an attraction to many desert visitors. Because livestock grazing will temporarily remove some flower heads, a conflict has occured between grazers and those desert residents and visitors attracted to desert spring floral displays. Resolution of this issue would primarily affect the ephemeral range type during the spring growing season. This issue may not be valid, however, since literature on the subject suggests that moderate grazing may enhance wild flower displays over an extended period of time.

Vegetation composition and trend has been adversely affected because livestock and burro numbers have not been managed within the carrying capacity.

Heavy off-road vehicle use, intensive mining activities, population centers, public land surrounding or intermixed with private agricultural land, and other intensive uses create special problems in implementing proper livestock management and use. These uses impair management procedures and economically weaken livestock operation by requiring ranchers to spend more time overseeing their livestock and by losses due to harassment of livestock and damage to range improvements.

APPROACH

The Wild Horse and Burro portion of this element will be analyzed separately from the livestock portion in order to present the management implications of each alternative more clearly.

In addition to four alternatives analyzed in other elements of this plan, one additional alternative of the element, No Grazing, will be considered in the livestock portion in order to present all possible options to grazing management. This analysis responds to the terms of a court-ordered agreement between BLM and the Natural Resources Defense Council. To retain the format of the four basic alternatives, the No Grazing Alternative will be addressed under the Protection Alternative.

Within each alternative the size, location, and distribution of the four multiple use classes varies. The Multiple Use Guidelines and Conflict Resolution Criteria give guidance for resolving the conflicts identified above, depending on the class in which these conflicts occur. As the proportion of these multiple use classes changes by alternative, the management practices and the animal unit months (AUMs) allocated in each allotment may change. The details of proposed livestock management and forage allocations will be presented by allotment within the four alternative tables.

These major decisions on forage allocation are presented on Table G-1. The same information is also included for proposed allotments on Table G-2. These tables are presented at the end of this element. The location of grazing allotments is shown on the Domestic Livestock Grazing Element Map with this element. The Management Practices Prescribed and Future Expectations table, is included in Appendix 2 for further reference.

The Major Decisions Table is comprised of four basic parts:

❶ Condition and Trend Columns. This portion of the table contains three very important pieces of information, divided into a "Rating" column and a "Factors" column. First, range "condition" refers to the character, amount, and stability of the vegetation, indicating the vegetation's ability to sustain production and its relation to the natural potential of the range. The present condition of the range is rated from "poor" to "excellent". Range is rated as poor when mostly sparse and unstable vegetation is produced, very little mulch is present, and the soil is very susceptible to erosion. Excellent range condition occurs when plant cover is composed largely of plants native to the site, key forage plants are vigorous and reproducing well, soil movement is low, and litter accumulation exists. Between these two extremes are "fair" and "good" condition ratings.

Secondly, "trend" describes the direction or change in vegetation and soil characteristics which directly result from human uses (e.g., livestock grazing, ORV use, wild horses and burros) and, sometimes, environmental factors. Trend is rated as "stable" when there is no noticeable change in botanical composition or density; "improving," when composition and density of desirable forage is increasing; and "declining," when the composition and density of desirable forage is decreasing while undesirable species are increasing.

The second subcolumn of the Condition and Trend Column is the "Factors" portion. This explains other major factors that may be influencing the condition and trend, other than climatic conditions and authorized grazing use. The numbers and symbols which indicate Rating and Factors are explained on the table.

❷ Carrying Capacity Column. This column shows the total perennial livestock forage AUMs for each allotment based on data collected and compiled for the Desert Plan from past surveys conducted from 1960 to 1976.

Previously, the carrying capacity for each allotment was determined by forage surveys or actual use and range managers' estimates. These AUMs are listed as "Current Livestock AUMs - Perennial."

Since the production of annual forage varies from year to year, the number of AUMs authorized changes almost every year. In the column "Last Year's AUMs - Ephemeral", the use authorized for the 1978 grazing season is listed as the most current example of a good forage production year.

The "AUMs Over Carrying Capacity" column shows in each allotment how many AUMs over the carrying capacity of the perennial range are consumed by existing levels of use.

③ Existing Use Columns. This portion of the Major Decision Table lists by allotment the amount of current forage use by livestock and wild horses and burros. Information on livestock use was obtained from grazing lease and permit use records; wild horse and burro use data came from estimates made by field personnel during 1979.

The carrying capacity of the ephemeral range cannot be estimated due to the extreme variability associated with the production, species composition, and other factors which make ephemeral a unique range type. For these reasons, the allocation of the annual forage of the ephemeral range is a variable amount, occasionally so small that no livestock is allowed to graze. 1963 and 1964 were such years. Annual production in some years has been measured as high as 700 lbs. dry weight per acre. In high production years, this average would exceed the capability of livestock operations to use all available forage within the carrying capability of the range.

In order to allocate the annual vegetation in ephemeral ranges soundly, the variability of that vegetation type must be taken into account. The management objective of ephemeral range allocation will be to reach 200 lbs. dry weight of vegetation per acre prior to authorizing livestock grazing, and to maintain that level throughout the grazing season. This objective considers all requirements of the ephemeral vegetation identified by other resource needs. Any forage produced above this level may be allocated to livestock. Any further restrictions on, or special management considerations for, grazing use on ephemeral range are included and identified in the Implementation Assumptions discussed below, and incorporated on Table G-1 and G-2.

The range carrying capacity based on perennial forage was obtained from existing forage survey or adjudicated use as compared to present allotment condition and trend. This carrying capacity will be adjusted according to data now being prepared by the Desert Plan Staff, using a remote sensing method which calculates the total biomass available as forage by interpreting satellite and aerial photos in conjunction with ground data. This technique will establish a base by which future monitoring will be used to adjust allocations following a full cycle of the management prescribed for each allotment.

④ Allocations - AUMs Columns. Once the carrying capacity is established for each allotment in terms of livestock forage AUMs, these AUMs must be allocated to the use or uses identified to have a need for them. This allocation does not include all biomass that is produced by the vegetation. Within the carrying capacity, only that part of the production which is available for livestock grazing is allocated. Forage users competing with livestock may also derive forage from vegetation not used by livestock or from areas unsuitable for livestock grazing.

Following the Major Decision Table is a Summary Table, G-4 which compares the cumulative results of allocations for each alternative.

IMPLEMENTATION ASSUMPTIONS

Details of the approved plan will be implemented through the development of Allotment Management Plans (AMPs) for all allotments considered. Decisions for adjustments in livestock authorizations will be issued within one year after approval of the plan. Decisions will go into effect on the following grazing season but may not be fully implemented for up to 5 years, depending on the severity of the adjustment.

Proposed range improvement projects will be analyzed in more detail during development of allotment management plans. To insure operationally sound AMPs, input from the livestock operator involved and the district grazing advisory board will be incorporated. Each proposed range project will also undergo a site specific enviornmental analysis to determine other resource impacts.

Seven new allotments are proposed. These are historical grazing allotments which have not been used in recent years. For analysis, their historical use is included in this plan to determine if any conflicts with other uses may exist. Prior to approving any grazing authorizations on these proposed allotments, a site-specific environmental analysis would be completed. In addition, an AMP would be developed to comply with the class guidelines set forth in this plan.

The implementation of proposed grazing management will include actions recommended during a conflict resolution process in which both grazing and wildlife specialists participated. Under separate discussions for Desert Tortoise, Bighorn Sheep, and riparian areas, livestock management practices and allocations for wild horses and burros are described below, according to how they differ in each multiple use class.

Desert Tortoise

With regard to Desert Tortoise:

- Class C areas will be subject to the following actions:

1. Maximum use of annuals by livestock will be restricted to 25 percent within tortoise crucial habitat, as defined in the Wildlife Element.

2. Condition and trend will be maintained or improved to a good condition rating and stable or improving trend.

3. There will be a 200 lb. annual production per acre turnout minimum for ephemeral ranges. This also applies for additional ephemeral authorization on perennial/ephemeral range.

4. Field monitoring of forage use will be conducted in crucial habitat.

5. Livestock watering and handling areas will be designated in crucial habitat.

6. Forage to tortoises will be allocated at initial desired levels in crucial habitat. When desired levels are reached, allocation will be again evaluated to determine if re-allocation is necessary. Forage will be allocated for existing populations outside crucial habitat.

7. In sheep allotments, only one grazing pass per season through an area within crucial habitat will be allowed where densities of tortoises are less than 150 per square mile and have a 5 percent of greater decline. If densities exceed 150 per square mile and the decline rate is less than 5 percent, then two grazing passes will be allowed.

8. Cattle turnout on ephemeral portions of allotment in tortoise crucial habitat will be restricted to thirty days following the beginning of tortoise foraging. Since this occurs from March 1st to April 1st, turnouts will occur between April 1st and April 30th.

● Class L areas are subject to the same actions as in Class C, stated above.

● Class M areas will be subject to the following actions:

1. Maximum use of annuals will be restricted to 50 percent in crucial habitat.

2. Condition and trend will be maintained or improved to a good condition and stable or improving trend.

3. There will be a 200 lb. annual production per acre turnout minimum for ephemeral ranges. This also applies for additional ephemeral authorizations on perennial/ephemeral range.

4. Use in crucial habitat will be monitored in the field by a team consisting of a wildlife biologist, a range conservationist, and a livestock operator.

5. Forage for existing tortoise populations will be allocated both inside and outside crucial habitat.

6. In sheep allotments, only one pass through an area will be allowed per season within crucial habitat, unless regrowth again reaches 200 lbs. annual production per acre, in which case a second pass will be allowed.

● Class I actions are the same as above, with the exception that allocations of forage for existing tortoise populations will be made only inside crucial habitat.

Bighorn Sheep

With regard to Bighorn Sheep:

● Class C areas will be subject to the following actions:

1. Forage will be allocated at twice the existing populations of Bighorn. Sheep allocation will be reevaluated when population reaches allocation.

2. Livestock grazing will be restricted in identified areas of critical Bighorn Sheep periods of use.

3. Maximum use of key forage species will be restricted within Bighorn ranges.

4. Condition and trend will be maintained or improved to a good condition rating and a stable or improving trend.

5. Alternative sources of water for cattle or Bighorn will be developed to reduce competition at water sources of common use.

● Class L areas are subject to same actions as stated above in Class C.

● Class M areas are subject to the following actions:

1. Forage will be allocated for existing Bighorn Sheep populations.

2. Critical springs will be fenced in to exclude cattle and water will be piped to areas away from the site.

3. Maximum use of key forage species will be restricted within Bighorn ranges.

4. Condition and trend will be maintained or improved to a good condition rating and a stable or improving trend.

5. Alternative sources of water will be developed for cattle or Bighorn Sheep to reduce competition at water sources of common use.

● In Class I areas the following actions are required:

1. Forage will be allocated for existing Bighorn Sheep populations.

2. Condition and trend will be maintained or improved to a good condition rating and a stable or improving trend.

Riparian Habitats

With regard to riparian habitats:

● Class C areas will be subjected to the following actions:

1. Significant riparian areas will be fenced from livestock use and water piped away if adequate water exists, consistent with approved wilderness management.

2. Other sources of water will be developed to reduce livestock use on riparian habitat.

● Class L areas are subject to the same restrictions as in Class C above.

● Class M areas will be subject to the following actions:

1. Critical portions of significant riparian habitats will be fenced, with the remainder of the habitat left open for livestock use.

2. Other sources of water will be developed to reduce livestock use on critical riparian habitat.

● For Class I, only the following action applies:

1. Other sources of water will be developed to reduce livestock use on critical riparian habitat.

Allocations to wild horse and burro herds are described in the Approach section of the Wild Horse and Burro portion of this element.

These management practices will be incorporated into activity plans such as Allotment Management Plans, Wild Horse and Burro Herd Management Plans, and Habitat Management Plans following approval of the California Desert Plan.

MONITORING

In order to evaluate the management techniques prescribed in this plan and to insure the objectives identified are being met, it is imperative to monitor the response of the range. The methods which will be used are outlined below.

Large Scale Aerial Photos of Selected Areas (1:1.000). These will be used to evaluate vegetation cover and composition, general trend, and condition. They will also serve as a permanent nonbiased record of vegetation. Selected transects from those already existing will be photographed and analyzed every five years, at increments of one-fifth per year.

Trend and Utilization Plots. These will be actual field measurements of vegetative cover, composition, and use made of the current annual production of forage. Where possible, these plots will be located within the large scale aerial photo transects. These will be recorded and analyzed at the end of each grazing cycle in those allotments under a grazing system, or every five years.

Livestock Grazing Exclosures. A limited number of these will be used as "no grazing" comparison areas.

Actual Use Data (Use Supervision). Numbers and time of use will be on record and allotments will periodically be checked for compliance to yearly authorized livestock use.

Field Transects. Field transects of vegetative cover and composition will be undertaken, sometimes including estimations of key forage plant species use.

Rain Gauge. These will provide site-specific measurements of precipitation which will aid in interpretation of production variations.

Production Plots for Annuals and Photo Index. The production plot will be used to determine annual plant production amounts, recorded in pounds per acre. Photographs of the various production levels will be compared to estimate production. This will be accomplished annually to determine turnout dates and to insure use levels do not exceed limits outlined in this plan.

LIVESTOCK GRAZING

Plan Alternatives

● NO ACTION ALTERNATIVE ●

Relationship to Issues

While this alternative meets the current needs of livestock operators by maintaining a status quo on grazing allocations, it does not adequately provide for allocation adjustments to settle the conflicts with wildlife and other sensitive resources.

Objective

To maintain the present level of use for domestic livestock grazing subject only to variation in ephemeral forage.

Element Components

Since no allocations are made in this alternative, the current existing uses of available perennial forage are provided at 102,000 AUMs (Major Decisions Table G-1). When the total use by all grazing animals exceeds the carrying capacity based on perennial forage, the amount of excess is shown in the "AUMs Over Carrying Capacity" column of the Major Decisions Table. This represents either an overuse due to excessive numbers of grazing animals or an over-obligation of the perennial forage by including ephemeral forage production in the estimated carrying capacity. Ephemeral forage use will be provided at the highest level possible under plan guidelines.

Implementation Assumptions

❶ No allocation to competing uses for forage will be made.

❷ Livestock use will remain at present levels.

❸ Use supervision, monitoring of grazing allotments, and maintenance of existing range improvement projects.

❹ Burro numbers will be assumed to remain at present population levels, which exceed the carrying capacity on several allotments. (See No Action Alternative for wild horse and burro.)

❺ Conflicts with other uses will be mitigated within the present management framework.

● PROTECTION ALTERNATIVE ●

Relationship to Issues

This alternative will, at the expense of a reduction in livestock use, essentially fulfill demands for the protection and enhancement of wildlife, the maintenance of viable wild horse and burro herds, and the protection of archaeological resources.

> "Desert grazing is unbelievably destructive. It depletes natural forage....endangers plant life."

Objective

To maintain a level of domestic livestock grazing consistent with stabilization and improvement of range conditions and full protection of sensitive resource values. Variations in overall domestic livestock grazing will respond to annual fluctuation in ephemeral forage and adjustments will be made to compensate for any identified over-obligation occurring in the consumption of perennial forage.

Element Components

Details of this alternative are shown by allotment on Table G-1 and in Appendix 2.

This alternative provides about 74,700 AUMs of perennial forage for livestock use and allows as much ephemeral forage use as possible under multiple use class guidelines assuring forage for wildlife and watershed needs. Ten new allotments and boundary extensions on existing allotments are proposed. Intensive grazing systems will be implemented on ten allotments in good condition to further improve range conditions.

● NO LIVESTOCK GRAZING ●

(Subalternative to Protection Alternative)

Relationship to Issues

The No Grazing Alternative provides a baseline option of eliminating livestock grazing on all allotments within the CDCA. It is presented in response to a court-ordered agreement between BLM and the Natural Resources Defense Council to address this alternative in all grazing environmental impact statements.

Objective

To allocate all vegetation to wildlife species, protection level sustainable herds of wild horses and burros, and nonconsumptive uses such as watershed maintenance. To maximize improvement of range conditions by means of the elimination of domestic grazing.

To implement this alternative, each livestock operator would be notified of the closure of grazing allotments two years in advance of the effective date. However, full closure may take up to three years. After that time no livestock would be authorized on public land in the CDCA. Maintenance of existing range improvements would become the responsibility of the BLM. There would be a need for increased supervision to enforce the decisions and to insure that trespass grazing did not occur. Numerous fencing adjustments would have to be made to separate private and public land. This would also require Congressional approval to be in compliance with Section 202(e)(2) of FLPMA.

The economic impact to all operations would, of course, be adverse and would increase proportionate to the dependency on public range of each livestock operation. Some operators may be eliminated. The stability of the local economy and local livestock industry would be threatened in some areas, because as much as 82,000 AUMs of perennial based livestock use would be lost from public lands.

● REDUCED GRAZING TO OPTIMIZE WILDLIFE PROTECTION ●
(Subalternative to Protection Alternative)

In the course of analyzing livestock grazing impacts in the Draft EIS, ten allotments were found in which there existed residual competition between livestock grazing and wildlife, despite earlier conflict resolution efforts in developing the reduced grazing levels of the protection alternative. The allotments in which the conflicts, primarily between Bighorn Sheep, Mule Deer, and cattle remain, are indicated and footnoted in Table G-1 on page 129. Cumulative reductions in livestock grazing to resolve these conflicts in favor of optimum wildlife protection are estimated to total 6,500 AUMs, or a total perennial livestock forage allocation of 68,200 AUMs. Ephemeral forage would be allocated under the same constraints as in the basic Protection Alternative for this element.

At this time there is insufficient information to specifically allocate reductions under this subalternative by allotment. Between release of the Draft Plan EIS and publication of the final proposed Plan/EIS, specific allocations will be developed to meet this subalternative's objective of permitting livestock grazing that will assure full protection of wildlife values. This allocation on impact assessment for each of the ten allotments involved will be prepared for decision makers' consideration and addressed in the final Plan/EIS document.

● BALANCED ALTERNATIVE ●

Relationship to Issues

This alternative gives equal consideration to all competing uses for the available forage and use of the range. In doing so, it sustains domestic livestock at a significantly reduced level from present use levels, while providing considerable protection of environmentally sensitive areas and resources such as threatened, endangered and sensitive species, though not to the degree that many proponents of this protection propose.

> "We need a difinitive evaluation of grazings economic importance in the desert....its relation to other resources and uses."

Objective

To maintain a level of domestic livestock grazing consistent with stabilization or maintenance of range conditions and with adequate protection of all resource values, after tradeoffs have been made between productive use capacity, protection of sensitive resource values, and maintenance of viable wild horse and burro herds. Variations in overall domestic livestock grazing will be tied to the portion of varying ephemeral forage production adjusted for other multiple use demands. Adjustment will be made as needed to correct any identified overconsumption of perennial forage.

Element Components

Details of this alternative are shown by allotment on Table G-1 and Appendix 2.

This alternative maintains 78,000 AUMs of perennial forage for livestock use and allows as much livestock use of ephemeral forage as possible under the guidelines provided in this plan. Range improvements which will promote the most efficient use of the range will be developed. This alternative also examines the possibility of allowing livestock grazing on 10 proposed new allotments and extending the boundaries of three existing allotments. Measures will be taken to improve the average range condition of 13 allotments to good condition by implementing intensive grazing systems.

● USE ALTERNATIVE ●

Relationship to Issues

This alternative will essentially optimize the range resource for livestock production within the concept of sustained yield, while providing the minimum legal requirements for protection of wildlife, other sensitive resource values and minimal wild horse and burro populations.

> "Ranchers have been in charge of range management for a long time-without a complete failure"

Objective

To provide the maximum level domestic livestock grazing consistent with sustained yield capacity, while providing minimum legally required protection of wildlife, wild horses and burros, and other resource values. Variations in livestock grazing authorization will be tied to annual fluctuations in ephemeral forage and compensation for overconsumption in perennial forage grazing where it is identified.

Element Components

Details of this alternative are shown by allotment on Table G-1 and in Appendix 2.

Under this alternative, 83,100 AUMs of perennial forage for livestock use will be maintained and as much livestock use of ephemeral forage as possible will be allowed, within the guidelines provided in this plan. As in the Balanced Alternative, range improvement promoting the most efficient use of the range resource will be developed. The allowance of grazing on 10 proposed new allotments and extending the boundary extension of three existing allotments will be considered. The average range condition of 14 allotments will be improved to good condition by implementing intensive grazing systems.

BACKGROUND and ISSUES

Wild horses and burros were introduced into the California desert with the influx of European man. Escaped and abandoned animals became readily naturalized. In 1971, Congress passed the Wild Horse and Burro Protection Act to insure that wild horses and burros are considered in the areas where they occur as integral components of the public land resources, and to provide for their protection from unauthorized capture, harrassment, or commercial exploitation. Responding to the provisions of the Act and subsequent regulations and directives, studies of wild horse and burro populations began. Thirty-four wild burro and seven wild horse Herd Management Areas were established within the CDCA as a result of these studies. High concentration of burros has caused conflicts with other resources in many areas; these conflicts will continue until burro populations are reduced to desirable management levels. In 1975, BLM began removing excess wild horses and burros from the CDCA. A total of 620 excess animals have been removed to date, although populations have increased from approximately 5500 to 9550 at the presnt time. The excess animals were placed under private maintenance agreements through BLM's Adopt-A-Horse Program. This effort has been hindered by the limited capacity of BLM to manage these animals in balance with other uses. Due to average precipitation-induced forage availability in recent years, wild horse and burro populations have increased and expanded their range at unacceptable rates. In providing for the management of wild horses and burros, BLM must establish the desirable number of animals to be maintained in each Herd Management Area and then maintain population numbers at the established levels.

Conflicts between livestock and burros arise when competition for forage is exceeded, and scarce water is insufficient for both uses. At the present time, wild burro numbers and livestock authorizations exceed the vegetative carrying capacity and are jeopardizing the sustained yield of forage. Livestock management facilities are another factor in this conflict. These facilities, particularly fencing, can inhibit the free-roaming nature of wild horses and burros and have an impact on their normal distribution and movement patterns. Improperly constructed management facilities can also result in concentrations of wild horses and burros which result in overuse of the vegetation resource.

In some areas, wildlife enters this competition for forage, space and water, particularly in riparian areas. The riparian system and associated cultural resource artifacts are often degraded by the effects of this intense use of limited resources. Because of their similar demands for forage, water, cover, and sometimes space, Bighorn sheep and wild horse and burro concentrations may share an area, to the detriment of the wild sheep and carrying capacity of the habitat.

APPROACH

The Wild Horse and Burro portion of this element is structured much as the livestock management portion is, except that forage allocations, in terms of animal numbers and AUMs, are presented by Herd Management Areas (HMAs) rather than by allotments. Within each HMA the maximum level of wild horse and burro populations is established. Using estimated 1979 wild horse and burro population levels as a basis, allocations were established according to current perennial vegetation carrying capacity. Other criteria used to establish forage allocations:

❶ In all multiple use classes, allocations within livestock grazing allotments for wildlife, watershed, and other environmental objectives directed by multiple use class objectives were taken from the total range carrying capacity prior to allocating for wild horses and burros.

❷ Outside established and proposed livestock grazing allotments, allocations for wild horses and burros are 100% of the available carrying capacity, following the guides established above.

❸ Within grazing allotments which are at or below the present carrying capacity, allocations for wild horse and burro populations are reduced by 25 percent in Class C, 50 percent in Class L, 75 percent in Class M and 90 percent in Class I, as based upon the estimated 1979 population levels.

❹ Allocations for wild horse and burro populations within grazing allotments which exceed the present carrying capacity are reduced by 25 percent of the available carrying capacity in Class C, 50 percent in Class L, 75 percent in Class M and 90 percent in Class I, following appropriate allocations for wildlife, etc.

MONITORING

Within each Herd Management Area, the following wild horse and burro monitoring standards apply for all plan alternatives:

❶ Estimate population numbers. Aerial censuses will be conducted approximately once every three to four years.

❷ Monitor distribution and movement patterns. Distribution and movement patterns will be monitored seasonally for at least three years. When possible, fixed wing aircraft will be used to monitor these patterns.

❸ Monitor population dynamics. Sample composition counts (young/adult ratios) will be conducted on 10 percent of the HMAs annually to estimate reproductive capacity of wild horse and burro populations. Sample sex ratio classifications will be made on 5 percent of the HMAs annually to estimate fecundity rates. In addition, sex ratio data will be collected from captured animals (by HMA) whenever excess animals are removed. Age structure data will be collected from captured animals (by HMA) whenever excess animals are removed to estimate wild horse and burro survival rates. In addition, age structure data will be collected from carcasses found on the range.

❹ Determine the seasonal diets. Fecal Analysis studies will be conducted four times each year, for a minimum of one year, to determine the seasonal diets of wild horses and burros. Fecal material will be collected to be representative of the four major seasons of the year.

In the event that the studies identified above indicate that a reduction of wild horse and burro numbers is needed to meet the requirements of the Desert Plan or Herd Management Area plans developed in the future, wild horse and burro populations will be adjusted accordingly.

Additional monitoring of the wild horses and burros habitat will be conducted in each HMA using applicable standards identified under the livestock grazing portion of the element.

IMPLEMENTATION ASSUMPTIONS

❶ The Wild Horse and Burro Protection Act of 1971 will remain in effect, basically unmodified.

❷ The BLM Adopt-A-Horse Program for capturing and transferring selected wild horses and burros to private owners will continue and moderate funding increases will be available.

❸ Humane shooting of wild horses and burros will be permitted where gathering and adoption proves inadequate to protect sensitive wildlife suffering severe competition.

❹ Progress will be made in population control of wild horses and burros studies now being designed under National Academy of Sciences Grants. These should be available in the second decade of the planning horizon (1990-2000) feasible applications of sterilization and other controls via population dynamic adjustments, such as selective capture, to adjust sex ration and fertility distribution in wild herds.

WILD

HORSES / BURROS

Plan Alternatives

● NO ACTION ALTERNATIVE ●

Relationship to Issues

The No Action alternative addresses the option of maintaining wild horse and burro numbers at the level estimated to be in existence in 1979 on all Herd Management Areas within the California Desert Conservation Area.

Objective

To allocate forage to support the wild horse and burro population levels of 750 wild horses and 8800 burros estimated to be in existence in 1979.

Element Components

To implement this alternative, forage will be allocated to wild horses and burros as based upon the 1979 population levels. This allocation will exceed the rangeland carrying capacity available for domestic livestock and wild horses and burros by 67,000 AUMs. An attempt will be made to maintain wild horse and burro numbers at the 1979 levels to the extent possible within existing funding for wild horse and burro management in California. Despite current gathering efforts, this level of funding will not keep pace with the wild horse and burro population increase, currently estimated at between 5 percent and 15 percent annually, unless shooting of these animals (supplementing capture and adoption) is used to reduce costs significantly. The result of current gathering effectiveness will be a deterioration of the rangeland resource.

● PROTECTION ALTERNATIVE ●

Relationship to Issues

The Protection Alternative addresses the option of reducing wild horse and burro populations to levels that, in combination with domestic livestock grazing reductions, will assure adequate forage for sustenance of wildlife species and protection of other sensitive resource values while maintaining viable, free-roaming wild horse and burro herds.

> "Burros may have been introduced but they are part of the desert and must be managed and protected."

Objective

Provide adequate forage to meet the year-round food requirements of 360 wild horses and 3800 wild burros in 32 Herd Management Areas located both inside and outside of livestock grazing allotments by allocating 4300 AUMs and 46,000 AUMs of perennial forage to wild horses and burros, respectively. Provide for wild horse and burro "specific ranges," preserve their free-roaming character, and, where necessary, totally remove them to achieve other resource protection objectives.

Element Components

This alternative would allocate forage to wild horses and burros in the manner identified on Table G-3. The alternative would provide for the opportunity to designate "specific ranges" for wild horses and burros in any areas which are designated as multiple use class M and I. The designation of "specific ranges" in multiple use class C and L would not be compatible with wilderness designation and preservation of natural and cultural values because "specific ranges" for wild horses and burros are dedicated primarily for the benefit of the animals. The alternative provides for the total removal of wild horses and burros from specific areas. These areas include: (1) areas established as Research Natural Areas where the presence of wild horses and burros is incompatible with Research Natural Area objectives; (2) areas where both intermingled land patterns and the attitudes of adjacent land owners or agencies in regard to wild horse and burro management dictate that continued management of wild horses and burros is not possible within the HMA. In the latter instance, total removal of wild horses and burros will be attempted only after all opportunities to insure the continued management of wild horses and burros on public lands have failed.

● BALANCED ALTERNATIVE ●

Relationship to Issues

The Balanced Alternative addresses the option of balancing wild horse and burro populations at sustainable levels more closely aligned with optimum use by domestic livestock and consistent with adequate protection of wildlife and other sensitive resource values.

> "I like to see burros. They are part of the desert that people come to see. Too bad there are so many to see."

Objective

Provide adequate forage to meet the year-round food requirements of 330 wild horses and 3600 wild burros in 22 Herd Management Areas located both inside and outside of livestock grazing allotments. Allocate 4,000 AUMs and 43,200 AUMs of perennial forage to wild horses and burros, respectively.

Provide for wild horse and burro "specific ranges", preserve their free-roaming character, and, where necessary, totally remove them to preserve other resource objectives.

The alternative also provides for the preservation of the normal distribution and movement patterns of wild horses and burros when constructing management facilities for domestic livestock. Guidelines for the design and construction of livestock management facilities in wild horse and burro HMAs are contained in draft BLM manual 4730.

Element Components

This alternative will allocate forage to wild horses and burros as identified on Table G-3. The alternative will also provide the same opportunities for management of wild horses and burros as identified under the Protection Alternative above. The only variation would be that additional opportunities for designating "specific ranges" would be available, because fewer multiple use class C and L areas are contained within the alternative.

The implementation of this alternative should be accomplished as rapidly as funding will permit following adoption of the plan. The most urgent implementation practices are allocation of forage and removal of excess wild horses and burros. In HMAs where livestock grazing allotments are not established, the carrying capacity of the range is not known at the present time. Therefore, formal allocation and complete removal of excess animals will not occur until carrying capacity determinations are available.

The implementation of total removal programs and designation of "specific ranges" will be accomplished as soon as possible after a decision concerning removal or designation has been reached.

The preservation of the free-roaming behavior of wild horses and burros will be pursued whenever management facilities for domestic livestock are developed.

● USE ALTERNATIVE ●

Relationship to Issues

The Use Alternative addresses the option of reducing wild horse and burro populations in favor of increased domestic livestock production while maintaining limited sustainable herds of wild and free roaming horses and burros.

> "A hardline approach is absolutely needed in some habitats. Extermination may be the only humane answer."

Objective

Provide adequate forage to meet the year-round food requirements of 310 wild horses and 3300 wild burros in 32 Herd Management Areas located both inside and outside of livestock grazing allotments, by allocating 3,700 AUMs and 39,800 AUMs of perennial forage to wild horses and burros, respectively.

Provide for wild horse and burro "specific ranges", preserve their free-roaming character, and, where necessary, totally remove them to preserve other resource objectives.

Element Components

This alternative will allocate forage to wild horses and burros as identified on Table G-3. The alternative will also provide the same opportunities for management of wild horses and burros as identified in the Protection and Balanced Alternatives above. The only variation would be that even more opportunities for designating "specific ranges" would be available because fewer multiple use class C and L areas are contained within the alternative.

The implementation of this alternative is essentially the same as identified under the Balanced Alternative above.

● COMPARATIVE ANALYSIS OF THE ALTERNATIVES ●

The comparative analysis table (Table G-4) is a summary presentation of the total AUMs for livestock, wild horse and burros, and wildlife allocated for the three range types -- perennial, ephemeral/perennial, and ephemeral. These totals include proposed and existing leases and permits. Each range type is totaled for the four alternatives. The No Action figures are existing estimated AUMs and exceed the carrying capacity of the range.

The ephemeral numbers are not included because these numbers are too highly variable. During each grazing year the available livestock forage will be determined as described earlier.

At the bottom of the table, the perennial AUMs are totaled for each alternative. Also shown in these totals are ephemeral AUMs for tortoises within grazing allotments.

There are 10 allotments and 230,000 acres under lease or permit within the perennial range type. Within the ephemeral/perennial range type there are 25 allotments and 2,634,000 acres leased or permitted. Also within the ephemeral/perennial range type are five proposed allotments with an additional 89,000 acres. The final range type, ephemeral, has 20 existing and 8 proposed leases or permits, representing 1,193,000 acres currently leased or permitted, and 484,000 acres proposed for lease or permit, respectively.

All totals for perennial AUMs allocated fall within the carrying capacity, exclusive of the No Action Alternative.

The comparative analysis table for wild horses and burros (Table G-5) compares the major plan actions for these animals. The figures shown on the table reflect AUMs of forage allocation, wild horse and burro numbers, number of Herd Management Areas, and total acres of wild horse and burro habitat within each of the plan action alternatives. These data are summaries from all wild horse and burro Herd Management Areas and include areas located both inside and outside of livestock grazing allotments.

The AUMs of forage allocation for wild horses and burros varies between alternatives because the percentage of each multiple use class contained within Herd Management Areas changes within each alternative. The result is that more AUMs of forage are available for allocation to wild horses and burros in the No Action Alternative and fewer AUMs are available for allocation in the Use Alternative.

In the No Action Alternative, the proposed management is to maintain wild horse and burro populations in all areas where they presently occur. In the other alternatives, it is proposed that wild horses and burros be totally removed from certain areas. Consequently, the number of Herd Management Areas and acres of wild horse and burro habitat are significantly reduced from that shown in the No Action Alternative.

Overall, the three action alternatives would approximately halve the number of wild horses and burros now on California desert ranges, as they are now significantly overstocked and environmentally detrimental. Between the three action alternatives, however, wild horse and burro herd numbers would vary only slightly, as most of the range use adjustments occur in domestic livestock grazing allocations.

Table G-1

EXISTING ALLOTMENTS: MAJOR DECISIONS

Map No.	Allotments: Name (BLM Number)	① Range Type	② Condition and Trend: Rating	② Condition and Trend: Factors	Class of Livestock	③ Carrying Capacity Perennial	④ Existing Use: Current Livestock AUMs Perennial	④ Existing Use: Last Year's AUMs Ephemeral	No Action Alternative – Estimated AUM's: Burro	Wild Horse	Bighorn	Deer	Tortoise	⑤ AUMs Over Carrying Capacity
1	Fishlake Valley (6003)	PER	3/S		Cattle	52	52							
2	Bar 99 (6001)	PER	3/S	B	Cattle	307	307							
3	Deep Springs (6005)	PER	2/S	B	Cattle	1,250	1,250		100	150		43		293
4	Last Chance (6004)[a]	EPH/PER	2/S	AB	Cattle	3,300	3,267		2,000		31	48		2,046
5	Oasis Ranch (6000)	PER	3/S	B	Cattle	700	656			60		79		95
6	South Oasis (6006)	PER	2/S	B	Cattle	450	477		50	100				177
7	Darwin (5010)	PER	2/S	B	Horses	77	43		420					386
8	Hunter Mtn. (5013)[a]	PER	2/S	B	Cattle	2,520	1,105		9,060	2,400	24	132		10,201
9	Lacey-Cactus-McCloud (6012)[a]	PER	2/D	B	Cattle	6,351	4,873		21,600	4,800	12	223		25,157
10	Olancha Common (6011)	PER	3/S		Cattle	758	702							
11	Tunawee Common (5009)[a]	PER	2/S	B	Sheep/Cattle	2,517	1,954		420			27		
12	Antelope Valley (5004)	EPH	2/S	AC	Sheep		325							
13	Bissel (5001)	EPH	2/S	AC	Sheep			308					15	
14	Cantil Common (5005)	EPH	2/I	AC	Sheep			19,000					267	
15	Monolith Cantil (5007)	EPH	3/S	AC	Sheep			1,500					131	
16	Oak Creek (5015)	EPH/PER	2/S		Cattle	16	16							
17	Rudnick Common (5008)	EPH/PER	2/D	C	Cattle	10,000	26,210							16,210
18	Warren (5002)	EPH/PER	2/S	AC	Sheep	55	55							
19	Walker Pass (0077)	EPH/PER	2/D	C	Cattle	4,500	5,250					135		885
20	Pahrump Valley (5000)	EPH/PER	2/S		Cattle	550	550				2		5	
21	Hanson (5006)	EPH/PER	3/S	A	Sheep/Cattle	1,395	1,395					108		108
22	Boron Sheep (7114)	EPH	3/S	A	Sheep			157					6	
23	Buckhorn Canyon (7103)	EPH	2/S	A	Sheep			672					44	
24	Goldstone (7104)	EPH	3/S	D	Sheep			168					7	
25	Granite Mtns (7105)	EPH	3/I	AC	Cattle			56						
26	Gravel Hills (7107)	EPH	3/S		Sheep			867					150	
27	Harper Lake (7119)	EPH/PER	3/S	C	Cattle	1,000	1,000						30	
28	Lava Mtns (7108)	EPH	3/S		Sheep			672					5	
29	Pilot Knob (7106)	EPH	3/S	BE	Cattle			3,584	1,200				29	
30	Shadow Mtns (7113)	EPH	2/D	AC	Sheep			1,200					115	
31	Spangler Hills (9113)	EPH	3/S	C	Sheep			760					42	
32	Stoddard Mtn. (7114)	EPH	3/S	AC	Sheep			5,671					273	
33	Superior Valley (7116)	EPH	3/S	CD	Sheep			2,328					184	
34	Valley Well (7117)	EPH/PER	2/D		Cattle	24	24							
35	Newberry/Ord (6218)	EPH/PER	2/S	CD	Cattle	1,400		1,854	276				1	730
36	Rattlesnake Cyn (7111)	EPH/PER	3/S	CD	Cattle	1,200	1,044						1	
37	Whitewater Cyn (7118)	EPH/PER	3/I	BC	Cattle	1,500	768		240			547		55
38	Afton Canyon (7215)	EPH	2/S	C	Cattle	200		1,000			60			860
39	Clark Mtn (7203)	EPH/PER	2/S	B	Cattle	2,200	1,872		3,000		96	192	27	2,960
40	Colton Hills (7702)[a]	EPH/PER	2/I	B	Cattle	3,100	2,877		1,200		86	222	114	1,285
41	Crescent Peak (7213)	EPH/PER	3/I		Cattle	1,600	1,560				36	31	16	27
42	Cronese Lake (7219)	EPH	2-3/S		Cattle			1,019						
43	Granite Mtn (7211)	EPH/PER	1-3/I	BC	Cattle	4,313	4,716		3,600		259	375	17	4,637
44	Gold Valley (7212)	EPH/PER	3/I	B	Cattle	1,200	1,200		660		24	69		753
45	Horsethief Spgs (7207)	EPH/PER	2/S		Cattle	2,700	2,418				50	192	14	
46	Kessler Spgs (7208)[a]	EPH/PER	3/I	B	Cattle	8,500	8,016		600		14	271	309	401
47	Lanfair Valley (7210)[a]	EPH/PER	2-3/I	BC	Cattle	13,000	12,165		1,980	96	269	444	17	1,954
48	Piute Valley (7204)	EPH	3/S		Horses/Cattle	200		180	600				11	400
49	Round Valley (7216)	EPH/PER	1/D		Cattle	30	27							
50	Valley View (7200)[a]	EPH/PER	2/I	B	Cattle	9,000	8,485		2,400		29	90	38	2,004
51	Valley Wells (7209)[a]	EPH/PER	2/I	B	Cattle	5,000	4,848		1,500				124	1,348
52	Ford Dry Lake (7044)	EPH	3/S	C	Sheep			1,500	12				6	
53	Jean Lake (7217)	EPH/PER	3/S		Cattle	400	312						7	
54	Lazy Daisy (7220)[a]	EPH/PER	3/S	BC	Cattle	3,000	2,400		600		108	180	131	216
55	Sheep Driveway	EPH	2/S	C	Sheep			100						
	Total					94,365	102,136	42,596	51,518	7,606	1,100	3,408	2,136	73,188

Map No.	Allotments: Name (BLM Number)	Protection Alternative: ⑥ Livestock Forage AUMs Perennial	Protection – Allocations - AUM's: Burro	Wild Horse	Bighorn	Deer	Tortoise ⑦	Balanced Alternative: ⑥ Livestock Forage AUMs Perennial	Balanced – Allocations - AUM's: Burro	Wild Horse	Bighorn	Deer	Tortoise ⑦
1	Fishlake Valley (6003)	52						52					
2	Bar 99 (6001)	307						307					
3	Deep Springs (6005)	1,064	42	102		42		1,094	30	84		42	
4	Last Chance (6004)[a]	2,176[a]	1,014		62	48		2,404	986		62	48	
5	Oasis Ranch (6000)	580		42		78		592		30		78	
6	South Oasis (6006)	325	90	45				354	66	30			
7	Darwin (5010)	41	36					41	36				
8	Hunter Mtn. (5013)[a]	460[a]	1,748	132	48	132		896	1,343	106	48	132	
9	Lacey-Cactus-McCloud (6012)[a]	4,643[a]	1,071	402	12	223		4,910	906	300	12	223	
10	Olancha Common (6011)	702				56		702				56	
11	Tunawee Common (5009)[a]	2,099[a]	468			27		2,321	246			27	
12	Antelope Valley (5004)												
13	Bissel (5001)						15						15
14	Cantil Common (5005)						704						652
15	Monolith Cantil (5007)						187						105
16	Oak Creek (5015)	16						16					
17	Rudnick Common (5008)	10,000						10,000					
18	Warren (5002)	55						55					
19	Walker Pass (0077)	4,365				135		4,265				135	
20	Pahrump Valley (5000)	545			5		10	545			5		10
21	Hanson (5006)	1,287				108		1,287				108	
22	Boron Sheep (7114)						7						7
23	Buckhorn Canyon (7103)						56						47
24	Goldstone (7104)						3						3
25	Granite Mtns (7105)												
26	Gravel Hills (7107)						275						221
27	Harper Lake (7119)	1,000					44	1,000					36
28	Lava Mtns (7108)						2						3
29	Pilot Knob (7106)						24						24
30	Shadow Mtns (7113)						135						120
31	Spangler Hills (9113)						34						34
32	Stoddard Mtn. (7114)						531						367
33	Superior Valley (7116)						325						197
34	Valley Well (7117)	24						24					
35	Newberry/Ord (6218)	1,262	138					1,265	135				2
36	Rattlesnake Cyn (7111)	1,200						1,200					
37	Whitewater Cyn (7118)	875	78			547		875	78			547	
38	Afton Canyon (7215)				120						115		
39	Clark Mtn (7203)	874	942		192	192	46	1,006	810		192	192	41
40	Colton Hills (7702)[a]	1,520[a]	1,185		173	222	278	1,613	1,092		173	222	207
41	Crescent Peak (7213)	1,497			72	31	18	1,497			72	31	18
42	Cronese Lake (7219)												
43	Granite Mtn (7211)	1,656	1,764		518	375	14	1,629	1,791		518	375	14
44	Gold Valley (7212)	942	141		48	69		960	123		48	69	
45	Horsethief Spgs (7207)	2,419			89	192		2,416			92	192	
46	Kessler Spgs (7208)[a]	7,526[a]	675		28	271	503	7,713	516			271	489
47	Lanfair Valley (7210)[a]	10,810[a]	1,170	69	507	444	457	11,191	786	48	537	444	331
48	Piute Valley (7204)						12						12
49	Round Valley (7216)	27						27					
50	Valley View (7200)[a]	7,892[a]	960		58	90	76	8,237	615		58	90	69
51	Valley Wells (7209)[a]	3,974[a]	1,026				191	4,292	708				84
52	Ford Dry Lake (7044)						4						4
53	Jean Lake (7217)	312					3	312					6
54	Lazy Daisy (7220)[a]	2,220[a]	384		216	180	707	2,454	150		216	180	403
55	Sheep Driveway												
	Total	74,747	12,932	792	2,148	3,462	4,661	77,951	10,211	598	2,148	3,462	3,521

Map No.	Allotments: Name (BLM Number)	Use Alternative: ⑥ Livestock Forage AUMs Perennial	Use – Allocations - AUM's: Burro	Wild Horse	Bighorn	Deer	Tortoise ⑦
1	Fishlake Valley (6003)	52					
2	Bar 99 (6001)	307					
3	Deep Springs (6005)	1,133	24	51		42	
4	Last Chance (6004)[a]	2,686	504		62	48	
5	Oasis Ranch (6000)	598		24		78	
6	South Oasis (6006)	378	57	15			
7	Darwin (5010)	59	18				
8	Hunter Mtn. (5013)[a]	1,088	1,164	88	48	132	
9	Lacey-Cactus-McCloud (6012)[a]	5,499	465	152	12	223	
10	Olancha Common (6011)	702				56	
11	Tunawee Common (5009)[a]	2,473	94			27	
12	Antelope Valley (5004)						
13	Bissel (5001)						15
14	Cantil Common (5005)						441
15	Monolith Cantil (5007)						105
16	Oak Creek (5015)	16					
17	Rudnick Common (5008)	10,000					
18	Warren (5002)	55					
19	Walker Pass (0077)	4,365				135	
20	Pahrump Valley (5000)	545			5		10
21	Hanson (5006)	1,287				108	
22	Boron Sheep (7114)						7
23	Buckhorn Canyon (7103)						47
24	Goldstone (7104)						3
25	Granite Mtns (7105)						
26	Gravel Hills (7107)						221
27	Harper Lake (7119)	1,000					37
28	Lava Mtns (7108)						1
29	Pilot Knob (7106)						25
30	Shadow Mtns (7113)						120
31	Spangler Hills (9113)						34
32	Stoddard Mtn. (7114)						367
33	Superior Valley (7116)						196
34	Valley Well (7117)	24					
35	Newberry/Ord (6218)	1,331	69				1
36	Rattlesnake Cyn (7111)	1,200					
37	Whitewater Cyn (7118)	881	72			547	
38	Afton Canyon (7215)				60		
39	Clark Mtn (7203)	1,426	447		105	192	23
40	Colton Hills (7702)[a]	2,117	627		134	222	179
41	Crescent Peak (7213)	1,521			48	31	8
42	Cronese Lake (7219)						
43	Granite Mtn (7211)	2,127	1,417		384	375	14
44	Gold Valley (7212)	1,044	63		24	69	
45	Horsethief Spgs (7207)	2,419			89	192	
46	Kessler Spgs (7208)[a]	7,905	324			271	330
47	Lanfair Valley (7210)[a]	11,811	390	24	331	444	215
48	Piute Valley (7204)						12
49	Round Valley (7216)	27					
50	Valley View (7200)[a]	8,497	384		29	90	37
51	Valley Wells (7209)[a]	4,487	513				66
52	Ford Dry Lake (7044)						
53	Jean Lake (7217)	312					3
54	Lazy Daisy (7220)[a]	2,475	150		195	180	246
55	Sheep Driveway						
	Total	81,847	6,782	354	1,526	3,462	2,763

MAJOR DECISIONS

① Range Type:
PER = Perennial
EPH = Ephemeral

② Condition and Trend: A rating of 3/S may be read as:

condition/trend = good/stable

Condition:
4 = Excellent
3 = Good
2 = Fair
1 = Poor

Trend:
S = Stable
I = Increasing
D = Decreasing

Factors: Major factors influencing Condition and Trend:

A = Unauthorized trespass (primarily non-licensed sheep grazing)
B = Uncontrolled or unmanaged burro and/or wild horse populations
C = Off-road vehicles
D = Minerals
E = Other

③ Carrying Capacity — Total livestock forage estimated in AUMs for each allotment, based on existing information.

④ Current Livestock AUMs — Perennial:
The production of perennial plants allocated to livestock.

Last Year's AUMs — Annual:
The production of annual plants allocated to livestock.

⑤ AUMs Over Carrying Capacity:
On some allotments, an over-obligation of perennial livestock forage has occurred based on existing levels of use by wildlife, wild horses and burros, and livestock. Allocation within the estimated carrying capacities has not been taken into consideration in the No Action Alternative.

⑥ If burro or wild horse population numbers are not reduced to the levels prescribed in the alternative, and if vegetation resources consequently become over used, appropriate reductions in forage use by livestock will occur.

⑦ Allocations of forage for other wildlife species are considered to include the potential livestock forage other than that used by livestock (the remainder of the forage after the maximum allowable utilization is taken), as well as the wildlife forage species that are not considered as livestock forage.

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[a] Environmental assessments indicate residual conflicts between livestock grazing and wildlife at protection alternative livestock allocation level. A further reduced grazing subalternative will be prepared and assessed in the final plan and EIS.

Table G-2

PROPOSED ALLOTMENTS: MAJOR DECISIONS

Map Number	Proposed Allotments Name	① Range Type	② Condition and Trend Rating	② Condition and Trend Factors	Class of Livestock	③ Carrying Capacity Perennial	④ Historical Use Livestock AUMs Perennial	④ Historical Use Livestock AUMs Annual	④ Historical Use Estimated AUMs Burro	④ Historical Use Estimated AUMs Wild Horse
56	Tecopa	EPH	2/S	A, E	Cattle		600			
57	Rattlesnake Cyn. Annex	EPH/PER	3/I	C, D	Cattle/Sheep	400	600			
58	Johnson Valley	EPH	2/I	A, C	Sheep			32,000		
59	Ludlow	EPH	3/I	A	Sheep			3,000		
60	Round Mountain	EPH/PER	3/S	D	Cattle/Sheep	500	450			
61	Chemehuevi	EPH	2/S	B	Sheep			4,000	5,760	
62	Rice Valley	EPH	4/I	C	Sheep			2,600		
63	Palen	EPH	3/I	C, D	Sheep			3,000		
64	Ford Dry Lake Annex	EPH	3/S	A	Sheep			2,000	24	
65	Homewood Canyon	EPH	2/D	B	Sheep		700		3,900	
66	Death Valley Junction	EPH/PER	3/S	B	Cattle	400	600			36
67	Lathrop Well	EPH/PER	3/S	B	Cattle	200	300			36
68	Granite Mtn. Annex	EPH/PER	2/S		Cattle		2,500			
	Total					1,500	5,750	45,600	9,684	72

Map Number	Proposed Allotments Name	Protection Alternative ⑤ Livestock Forage AUMs Perennial	Protection Alternative Allocations — AUMs ⑥ Burro	Wild Horse	Bighorn	Deer	Tortoise	Balanced Alternative ⑤ Livestock Forage Aums Perennial	Balanced Alternative Allocations — AUMs ⑥ Burro	Wild Horse	Bighorn	Deer	Tortoise	Use Alternative ⑤ Livestock Forage AUMs Perennial	Use Alternative Allocations — AUMs ⑥ Burro	Wild Horse	Bighorn	Deer	Tortoise
56	Tecopa																		
57	Rattlesnake Cyn. Annex	360						360						360					
58	Johnson Valley						96						67						48
59	Ludlow																		
60	Round Mountain	400						400						400					
61	Chemehuevi						209						209						139
62	Rice Valley																		
63	Palen																		
64	Ford Dry Lake Annex						14						10						6
65	Homewood Canyon																		
66	Death Valley Junction	300		18				300		12				300		9			
67	Lathrop Well	150		18				150		18				150		15			
68	Granite Mtn. Annex																		
	Total	850		36			319	1,210		30			286	1,210		24			193

MAJOR DECISIONS

① Range Type: PER = Perennial
EPH = Ephemeral

② Condition and Trend: A rating of 3/S may be read as:

condition/trend = good/stable

Condition: 4 = Excellent
3 = Good
2 = Fair
1 = Poor

Trend: S = Stable
I = Increasing
D = Decreasing

Factors: Major factors influencing Condition and Trend:

A = Unauthorized trespass (primarily non-licensed sheep grazing)
B = Uncontrolled or unmanaged burro and/or wild horse populations
C = Off-road vehicles
D = Minerals
E = Other

③ Carrying Capacity — Total livestock forage estimated in AUMs for each allotment, based on existing information.

④ Historical Use:

Allotments which have been leased in the past, but are not currently being leased.

Perennial = Estimated allocation of perennial plants for livestock utilization.

Annual = Estimated allocation of annual plants for livestock utilization.

⑤ If burro or wild horse population numbers are not reduced to the levels prescribed in the alternative, and if vegetation resources consequently become over-utilized, appropriate reductions in forage utilization by livestock will occur consistent with Bureau policy.

⑥ Allocations of forage for other wildlife species are considered to include the potential livestock forage other than that used by livestock (the remainder of the forage after the maximum allowable utilization is taken), as well as the wildlife forage species that are not considered as livestock forage.

Table G-3

WILD HORSE AND BURRO MANAGEMENT

Herd Management Area			Herd Management Area Ownership (Percentage)		Acres In Grazing Allotments	[1] Population Trend	[2] Habitat Condition and Trend		No Action Alternative		Alternative Decisions: Protection Alternative		Alternative Decisions: Balanced Alternative		Use Alternative	
Number	Name	Approximate Acres	BLM Administered	Private and State Lands			Total Habitat	Concentrated Areas	Horses	Burros	Horses	Burros	Horses	Burros	Horses	Burros
1	Piper Mountain	19,280	97	3	17,930	I	F/S	F/D	40	105	32	94	30	87	24	84
2	Saline Valley	386,000	81	19		I	F/D	F/D		800		800		800		800
3	Hunter Mountain	48,000	83	17	23,040	I	F/S	P/D	200	800	41	142	39	109	37	95
4	Sand Springs/Last Chance	59,140	99	1	34,301	I	F/S	P/D		200		160		145		123
5	Lee Flat	73,000	100		54,750	I	F/E			60		46		45		44
6	Centennial Valley	21,700	85	15	21,700	I	F/S	F/D		117		59		56		29
7	Darwin	23,800	100		5,712	I	F/S	F/D		118		107		101		92
8	Towne Pass	117,600	38	62		I	P/D	P/D		700						
9	Panamint Mountains	465,040	27	72		I	P/D	P/D		175						
10	Slate Range	44,800	64	36		I	F/D	F/D		218		218		218		218
11	Trona	128,960	17	83	32,240[a]	I	P/D	P/D		1,300		975		975		975
12	Coso Basin	332,000	50	50	167,424	I	F/S	F/S	448	1,950	258	39	239	26	230	19
13	Chicago Valley	30,000	100			I	F/S	F/S		25		25		25		25
16	Kramer	13,500	57	43	7,695	S	G/S	G/S		25						
17	Summit Pass	2,000	35	65		UK	UK	UK			UK	UK		UK		UK
18	Ord Mountain	17,480	100		14,683[a]	I	G/S	G/S		25		25		13		8
19	Cave Mountain	13,000	100			I	G/S	G/S		5		5		5		5
20	Morongo	57,100	47	53		I	G/S	G/S		20		13		13		9
21	Clark Mountain	173,100	95	5	154,059	I	F/S	F/D		325		180		143		89
22	Indian Spring	178,500	100		174,930	I	G/S	F/D		150		98		66		43
23	Granite Mountain	60,100	100		60,100	I	G/S	F/D		155		107		113		100
24	Providence Mountain	76,400	100		31,324	I	F/S	F/D		195		144		135		79
25	Woods/Hackberry	39,400	100		39,400	I	F/S	F/D	12	175	6	115	4	79	2	40
26	Marl Spring	11,500	100		11,500	I	F/S	F/D		30		21		15		8
27	Cut Spring	4,500	100		4,500	I	F/S	F/D		20		14		10		5
28	Piute Mountains	30,100	100			I	F/S	F/D		50		32		13		13
29	Dead Mountains	48,600	100			I	F/S	F/D		50		35		35		35
30	Chemehuevi	253,100	85	15	151,860[a]	I	F/D	F/D		800		320		320		320
31	Palm Canyon	24,320	34	66		S	G/S	G/S	6		2		2		2	
32	Coyote Canyon	41,400	19	81		I	F/S	F/S	20							
33	Chuckwalla	399,500	98	2	31,960[a]	I	F/S	F/D		20		16		15		15
34	Chocolate Mountain	92,150	11	89		I	F/S	F/D		50						
35	Milpitas Mountain	45,200	42	58		I	F/S	F/S		75						
36	Picacho	58,000	79	21		UK	UK	UK		50		40		40		40
37	Ash Meadows	118,000	98	2	35,400[a]	I	F/S	F/D	20		17		17		16	
	Total	3,506,270			1,074,508				746	8,788	356	3,820	331	3,602	311	3,313
	Total AUMs								8,952	105,456	4,272	45,960	3,972	43,224	3,732	39,756

[a] Includes proposed allotments

LEGEND

[1] Population Trend
I = Increasing
S = Stable
D = Declining

UK = Unknown

[2] Habitat Condition and Trend
Condition:
P = Poor
F = Fair
G = Good
E = Excellent
Trend:
I = Increasing
S = Stable
D = Declining

Table G-4

SUMMARY COMPARISON OF LIVESTOCK GRAZING MANAGEMENT BY ALTERNATIVE

	No Action Alternative	Protection Alternative	Balanced Alternative	Use Alternative
Perennial Range Type				
Authorized Livestock AUMs	10,100	10,300	11,300	12,300
Allocated Wildlife AUMs (Perennial)	500	600	600	600
Allocated Wild Horse and Burro AUMs	38,900	4,200	3,200	2,200
Ephemeral/Perennial Range Type				
Perennial Livestock Authorized AUMs	92,000	64,400	67,900	70,800
Ephemeral Variable Authorized AUMs[a]				
Allocated Wildlife AUMs (Perennial)	3,900	4,900	4,900	4,300
(Ephemeral)	900	2,300	1,700	1,200
Allocated Wild Horse and Burro AUMs	18,400	9,600	7,700	5,000
Ephemeral Range Type				
Ephemeral Variable Authorized Livestock AUMs[a]				
Allocated Wildlife AUMs (Perennial)	60	120	115	60
(Ephemeral, tortoise)	1,300	2,600	2,100	1,800
Allocated Wild Horse and Burro AUMs	1,800			
Total — Livestock:				
Perennial AUMs	102,100	74,700	79,200	83,100
Ephemeral AUMs[a]				
Total — Wildlife:				
Perennial AUMs	4,500	5,600	5,600	5,000
Ephemeral AUMs	2,200	4,900	3,800	3,000
Total — Wild Horse and Burro: AUMs	59,100	13,800	10,900	7,200
Perennial Carrying Capacity	95,900	95,900	95,900	95,900

[a] Ephemeral allocations to be determined yearly, after 200 lbs per acre annual production.

Table G-5

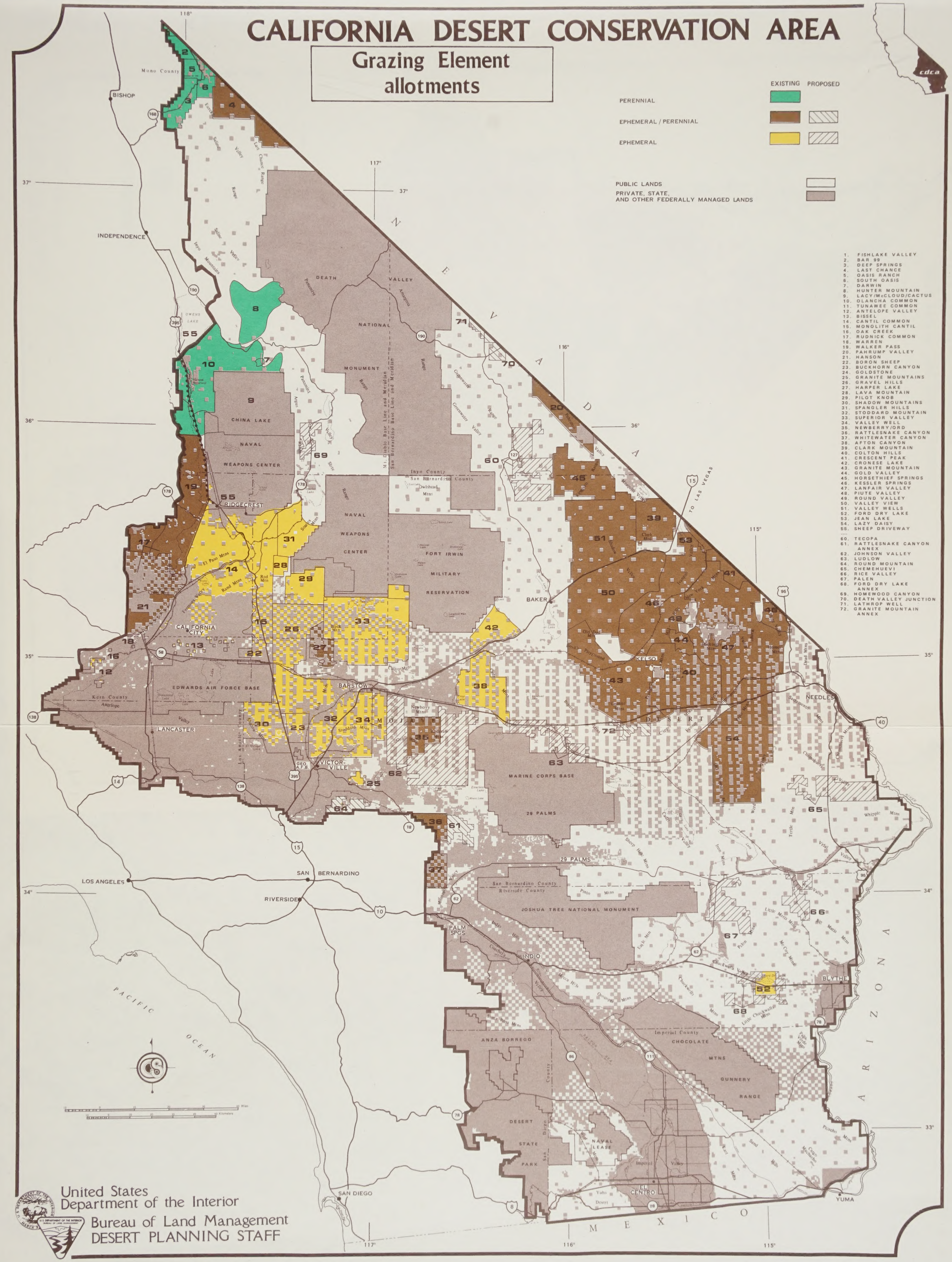
SUMMARY COMPARISON OF WILD HORSE AND BURRO MANAGEMENT BY ALTERNATIVE

Plan Action	Unit of Measure	No Action Alternative	Protection Alternative	Balanced Alternative	Use Alternative
Wild Horse and Burro					
Wild Horse Forage Allocations[a]	AUMs	8,952	4,272	3,972	3,732
Wild Burro Forage Allocations[a]	AUMs	105,456	45,960	43,224	39,756
	Total	114,408	50,232	47,196	43,488
Wild Horses	No.	746	356	331	311
Wild Burros	No.	8,788	3,830	3,602	3,313
	Total	9,534	4,186	3,933	3,624
Reduction of AUMs	Percent		56	59	62
Herd Management Areas					
For Wild Horses	No.	7	5	5	5
For Wild Burros	No	32	28	28	28
	Total Acres	3,506,270	2,731,380	2,731,380	2,731,380

[a] Includes allocation both within and outside livestock grazing allotments.

CALIFORNIA DESERT CONSERVATION AREA

Grazing Element allotments



cdca
118°
117°
116°
115°
37°
36°
35°
34°
33°
Mono County
BISHOP
INDEPENDENCE
OWENS LAKE
DEATH VALLEY NATIONAL MONUMENT
CHINA LAKE NAVAL WEAPONS CENTER
NAVAL WEAPONS CENTER
FORT IRWIN MILITARY RESERVATION
Inyo County
San Bernardino County
RIDGECREST
CALIFORNIA CITY
Kern County
EDWARDS AIR FORCE BASE
LANCASTER
Los Angeles County
GEO A.F.B.
VICTORVILLE
BARSTOW
BAKER
KELSO
TO LAS VEGAS
NEEDLES
MARINE CORPS BASE 29 PALMS
29 PALMS
San Bernardino County
Riverside County
JOSHUA TREE NATIONAL MONUMENT
PALM SPGS
INDIO
BLYTHE
Imperial County
CHOCOLATE MTNS GUNNERY RANGE
ANZA BORREGO DESERT STATE PARK
San Diego County
NAVAL LEASE
EL CENTRO
YUMA
SAN DIEGO
LOS ANGELES
SAN BERNARDINO
RIVERSIDE
NEVADA
ARIZONA
MEXICO
PACIFIC OCEAN
MOJAVE DESERT

	EXISTING	PROPOSED
PERENNIAL	🟩	
EPHEMERAL / PERENNIAL	🟫	▨
EPHEMERAL	🟨	▨

PUBLIC LANDS	☐
PRIVATE, STATE, AND OTHER FEDERALLY MANAGED LANDS	▨

1. FISHLAKE VALLEY
2. BAR 99
3. DEEP SPRINGS
4. LAST CHANCE
5. OASIS RANCH
6. SOUTH OASIS
7. DARWIN
8. HUNTER MOUNTAIN
9. LACY/McCLOUD/CACTUS
10. OLANCHA COMMON
11. TUNAWEE COMMON
12. ANTELOPE VALLEY
13. BISSEL
14. CANTIL COMMON
15. MONOLITH CANTIL
16. OAK CREEK
17. RUDNICK COMMON
18. WARREN
19. WALKER PASS
20. PAHRUMP VALLEY
21. HANSON
22. BORON SHEEP
23. BUCKHORN CANYON
24. GOLDSTONE
25. GRANITE MOUNTAINS
26. GRAVEL HILLS
27. HARPER LAKE
28. LAVA MOUNTAIN
29. PILOT KNOB
30. SHADOW MOUNTAINS
31. SPANGLER HILLS
32. STODDARD MOUNTAIN
33. SUPERIOR VALLEY
34. VALLEY WELL
35. NEWBERRY/ORD
36. RATTLESNAKE CANYON
37. WHITEWATER CANYON
38. AFTON CANYON
39. CLARK MOUNTAIN
40. COLTON HILLS
41. CRESCENT PEAK
42. CRONESE LAKE
43. GRANITE MOUNTAIN
44. GOLD VALLEY
45. HORSETHIEF SPRINGS
46. KESSLER SPRINGS
47. LANFAIR VALLEY
48. PIUTE VALLEY
49. ROUND VALLEY
50. VALLEY VIEW
51. VALLEY WELLS
52. FORD DRY LAKE
53. JEAN LAKE
54. LAZY DAISY
55. SHEEP DRIVEWAY

....

60. TECOPA
61. RATTLESNAKE CANYON ANNEX
62. JOHNSON VALLEY
63. LUDLOW
64. ROUND MOUNTAIN
65. CHEMEHUEVI
66. RICE VALLEY
67. PALEN
68. FORD DRY LAKE ANNEX
69. HOMEWOOD CANYON
70. DEATH VALLEY JUNCTION
71. LATHROP WELL
72. GRANITE MOUNTAIN ANNEX

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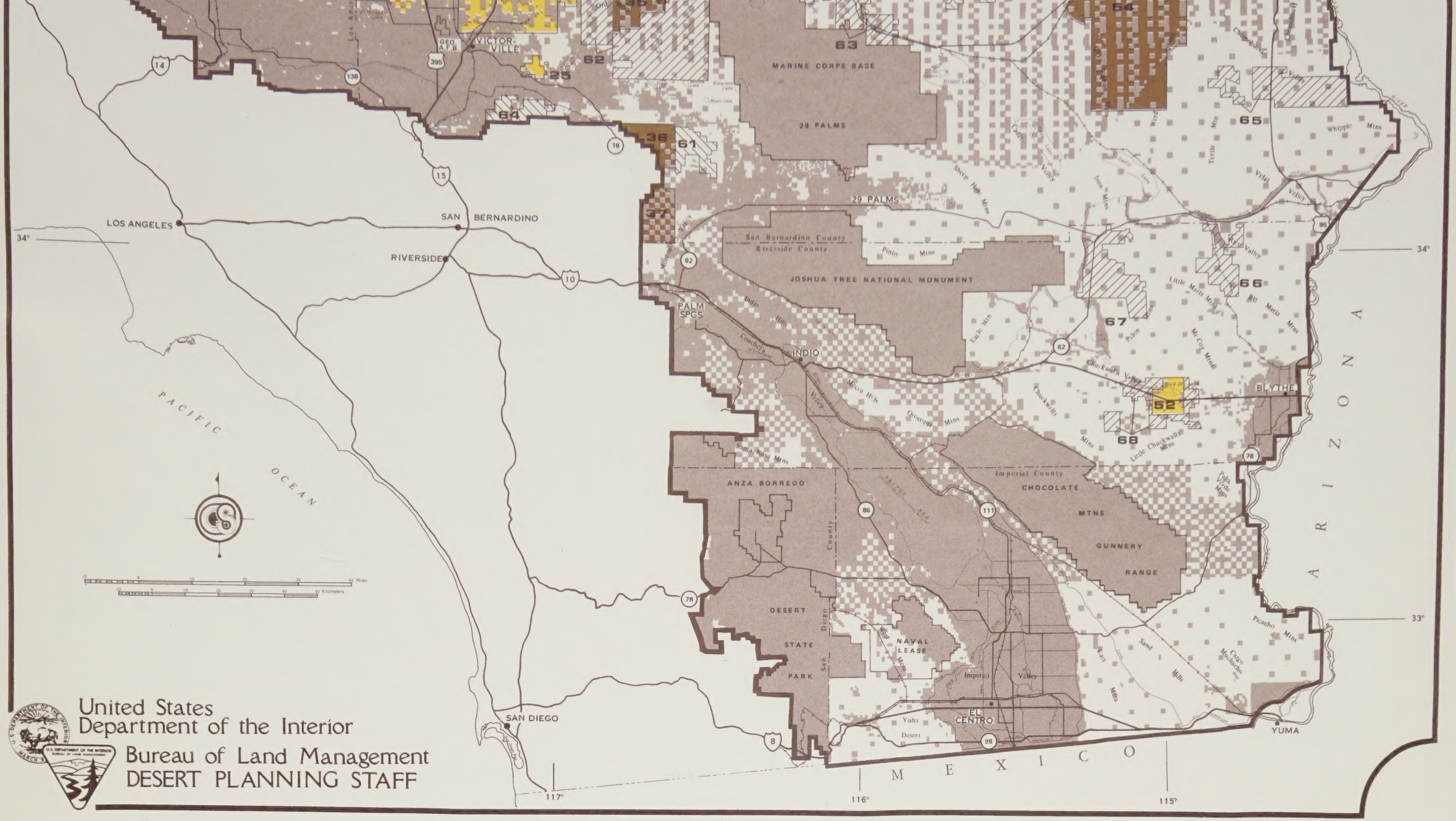

MARINE CORPS BASE
29 PALMS
29 PALMS
JOSHUA TREE NATIONAL MONUMENT
San Bernardino County
Riverside County
Imperial County
San Diego County
CHOCOLATE MTNS GUNNERY RANGE
ANZA BORREGO DESERT STATE PARK
NAVAL LEASE
SALTON SEA
ARIZONA
MEXICO
PACIFIC OCEAN
LOS ANGELES
SAN BERNARDINO
RIVERSIDE
SAN DIEGO
VICTORVILLE
GEO. A.F.B.
PALM SPGS
INDIO
BLYTHE
EL CENTRO
YUMA
Pinto Mtns
Eagle Mtn
Sheep Hole Mtns
Iron Mtns
Cadiz Valley
Turtle Mtn
Vidal Valley
Whipple Mtns
Rice Valley
Little Maria Mtns
Big Maria Mtns
McCoy Mtns
Palen Mtns
Chuckwalla Valley
Chuckwalla Mtns
Little Chuckwalla Mtns
Orocopia Mtns
Mecca Hills
Indio Hills
Coachella Valley
Santa Rosa Mtns
Palo Verde Mtns
Picacho Mtns
Cargo Muchacho
Sand Hills
East Mesa
West Mesa
Imperial Valley
Yuha Desert
Chemehuevi Valley
RIVER
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116°
115°
Miles
Kilometers

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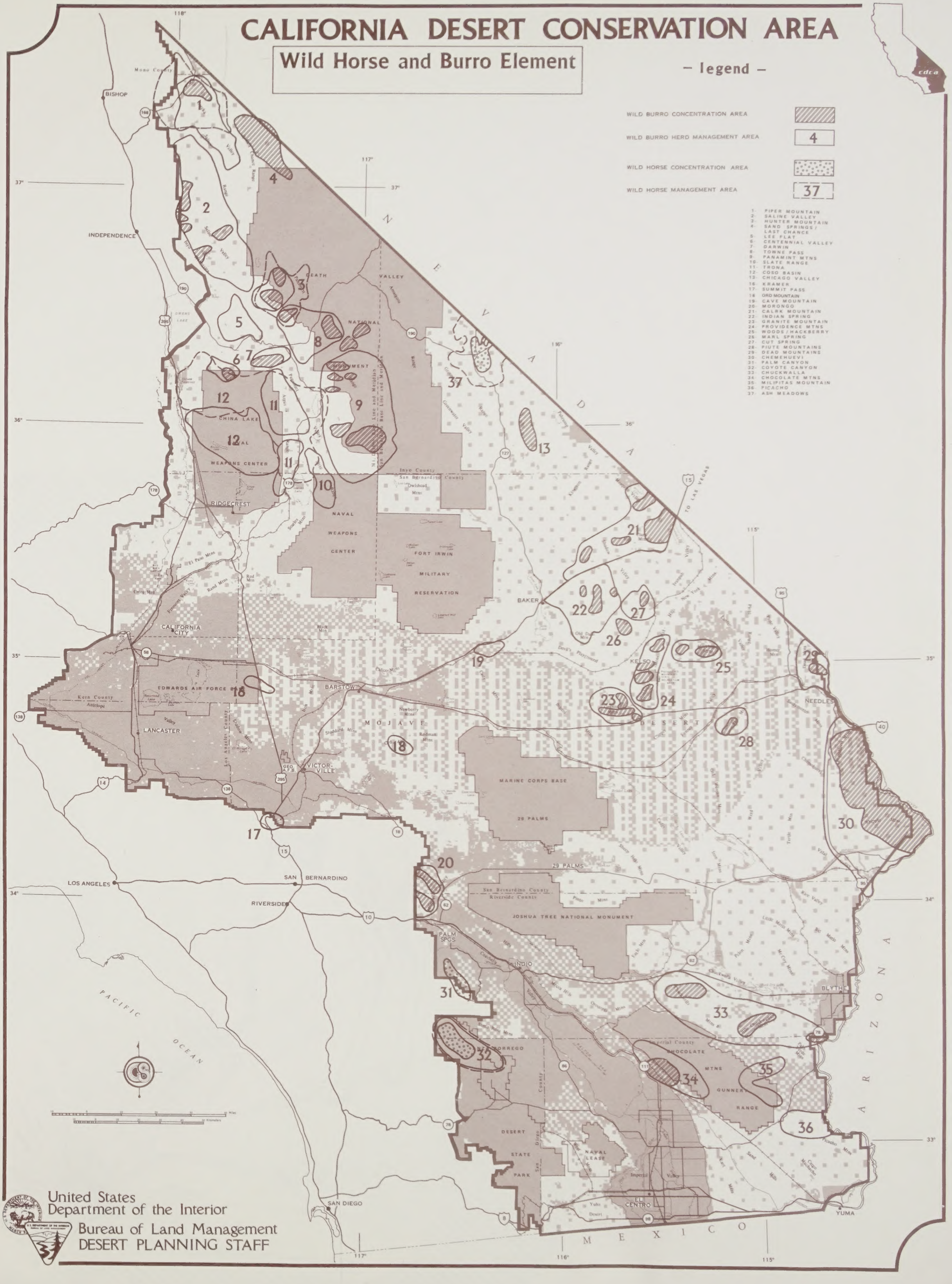
Department of the Interior
Bureau of Land Management
DESERT PLANNING STAFF

CALIFORNIA DESERT CONSERVATION AREA

Wild Horse and Burro Element


– legend –
WILD BURRO CONCENTRATION AREA ▨
WILD BURRO HERD MANAGEMENT AREA 4
WILD HORSE CONCENTRATION AREA
WILD HORSE MANAGEMENT AREA 37
1- PIPER MOUNTAIN
2- SALINE VALLEY
3- HUNTER MOUNTAIN
4- SAND SPRINGS / LAST CHANCE
5- LEE FLAT
6- CENTENNIAL VALLEY
7- DARWIN
8- TOWNE PASS
9- PANAMINT MTNS
10- SLATE RANGE
11- TRONA
12- COSO BASIN
13- CHICAGO VALLEY
16- KRAMER
17- SUMMIT PASS
18 ORD MOUNTAIN
19- CAVE MOUNTAIN
20- MORONGO
21- CALRK MOUNTAIN
22- INDIAN SPRING
23- GRANITE MOUNTAIN
24- PROVIDENCE MTNS
25- WOODS / HACKBERRY
26- MARL SPRING
27- CUT SPRING
28- PIUTE MOUNTAINS
29- DEAD MOUNTAINS
30- CHEMEHUEVI
31- PALM CANYON
32- COYOTE CANYON
33- CHUCKWALLA
34- CHOCOLATE MTNS
35- MILIPITAS MOUNTAIN
36- PICACHO
37- ASH MEADOWS
cdca
118°
117°
116°
115°
37°
36°
35°
34°
33°
Mono County
BISHOP
INDEPENDENCE
DEATH VALLEY NATIONAL MONUMENT
CHINA LAKE NAVAL WEAPONS CENTER
RIDGECREST
NAVAL WEAPONS CENTER
FORT IRWIN MILITARY RESERVATION
Inyo County
San Bernardino County
BAKER
TO LAS VEGAS
N E V A D A
CALIFORNIA CITY
EDWARDS AIR FORCE BASE
Kern County
LANCASTER
Los Angeles County
BARSTOW
M O J A V E D E S E R T
VICTORVILLE
GEO. A.F.B.
KELSO
NEEDLES
MARINE CORPS BASE 29 PALMS
29 PALMS
LOS ANGELES
SAN BERNARDINO
RIVERSIDE
San Bernardino County
Riverside County
JOSHUA TREE NATIONAL MONUMENT
PALM SPGS
INDIO
BLYTHE
BORREGO
Imperial County
CHOCOLATE MTNS
GUNNERY RANGE
DESERT STATE PARK
NAVAL LEASE
EL CENTRO
SAN DIEGO
YUMA
M E X I C O
A R I Z O N A
P A C I F I C O C E A N
Miles
Kilometers

United States
Department of the Interior

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DESERT PLANNING STAFF

C-8
Wildlife

BACKGROUND and ISSUES

Because of its complex combination of climate, soils, and topography, the California Desert Conservation Area contains over 100 habitat types which support a high diversity of wildlife, including over 640 vertebrate species and thousands of invertebrates. Landforms such as mountains, bajadas, valley bottoms, sand dunes, washes, and lake beds mix with varying climatic conditions to create throughout the CDCA both a variety of broad common habitat types and numerous islands of special habitats, such as white fir forests and oases.

Contributing to this habitat diversity are the presence of three major desert provinces within the CDCA and the influences of adjacent biotic regions such as the Sierra Nevadan, the Pacific, and the Sonoran of Arizona and Mexico. The characteristics of these major desert provinces and some distinctive habitats within them are briefly discussed below:

Great Basin: At the extreme northern tip of the CDCA, wildlife habitats exhibit strong influences from the cold Great Basin Desert of Nevada and Utah. Among such typical assemblages as shadscale shrub and Great Basin sagebrush shrub, this province supports some species found nowhere else in the California desert.

Mojave Desert: An upland desert lying primarily between 2,000 and 5,000 feet elevations, the Mojave has a diverse range of communities, including various saltbush assemblages, the northern limit of creosote communities, and, exclusively, the Joshua tree. Joshua tree woodland is an important habitat type. With varying and frequently relatively diverse understory vegetation, it also provides a vertical stratification used by several species to nest and perch. The litter provided by downed trees is also an important habitat material.

Colorado Desert: The generally lower rainfall, higher temperatures and rockier soils found in the southern part of the CDCA support a sparser vegetation than is typical in the Mojave. Common to the Colorado Desert, shrub-dominated habitats support wildlife species considered typical of deserts, such as the wide-ranging Black-tailed Jackrabbit, Roadrunner, and Red-tailed Hawk. Sandy areas, desert pavements, rocky areas, and other specific habitats support more specialized species. Washes, frequently dominated by trees such as palo verde and smoketree, support the densest and most diverse wildlife populations of the dry Colorado Desert communities.

Among the numerous and complex habitat variations within these major desert provinces are habitat types which occur intermittently throughout the desert. Several mountain ranges and peaks each support distinct wildlife communities. The large mountain ranges of the eastern Mojave, for example, have habitat components typical of the Rocky Mountains. Though rare, the wetland habitats throughout the CDCA are extremely important to wildlife. Marshes, riparian areas and oases provide more cover, food, and, often, drinking water to support denser wildlife populations than in surrounding areas, as well as many species which do not occur outside the wetland habitat. Playas and sand dunes are also important. On dry lake beds invertebrates such as the Fairy Shrimp survive in eggs and cysts in the sun-crusted lake beds, hatch in large populations when rainfall creates standing water, also creating habitat for migrating waterfowl. Sand dune systems provide habitat for vertebrates found in other sandy areas. More importantly, they supply habitat for many invertebrate species found nowhere else in the world; some species are restricted to a single dune.

The huge diversity of wildlife in the CDCA includes approximately 94 species of mammals, 419 bird species, 64 reptile species, 16 amphibian species, 6 native and 34 introduced species of fish, and thousands of invertebrate species (see Appendix 3).

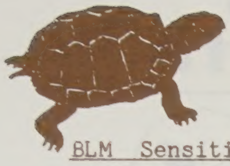
About half the mammal species are rodents, which are adapted in a variety of ways to daily and seasonal temperature extremes. The only ungulates which survive in the CDCA today are Bighorn Sheep and Mule Deer; the Pronghorn Antelope, once widespread, has been extirpated. Most of the bird species are migratory, present only during breeding, winter, or migratory seasons; several exotic bird species have successfully invaded the desert or have been introduced by man. Reptiles, in general, display excellent adaptions to desert conditions. The Desert Tortoise and many snakes and lizards live underground much of each day and a large portion of the year. Amphibians, depending on water for reproduction, are rare in the desert. The native fish species are especially adapted to the high salinity and temperature and the extremely variable seasonal and daily temperatures of desert waters. Several other fishes have been introduced to the rivers and canals of the CDCA.

Little is known about the distribution and species of the thousands of CDCA invertebrate species, which include insects, snails, scorpions, and centipedes. Critical to the functions of desert ecosystems, they provide food for vertebrates and aid in the cycling of nutrients, pollination of flowers, and other ecological processes.

All populations of wildlife are significant to some degree. For a variety of reasons, certain categories of wildlife are especially significant. These categories include:

Federally listed species: The Mohave Chub, Desert Slender Salamander, California Brown Pelican, Aleutian Canada Goose, Bald Eagle, Peregrine Falcon, and Yuma Clapper Rail are CDCA species which have been listed by the Federal government as Threatened or Endangered. "Critical Habitat" of Threatened or Endangered species is any area essential to the survival and recovery of Threatened or Endangered species to a point at which the protective measures of the Endangered Species Act are no longer required. Currently there are no officially proposed critical habitats in the CDCA.

State-listed species: Of the seven species on the Federal list, all are listed as Endangered by the State of California except the Aleutian Canada Goose and the Yuma Clapper Rail. The Yuma Clapper Rail is listed as Rare by the State. In addition, six other CDCA species are listed as Rare by the State: Black Toad, Tehachapi Slender Salamander, California Black Rail, California Yellow-billed Cuckoo, Mohave Ground Squirrel, and Peninsular Bighorn Sheep.



BLM Sensitive species: Sensitive species include animals undergoing official status review or being proposed for listing pursuant to the Endangered Species Act, animals with rapidly declining populations, and animals with such limited habitat or population size that they are unable to withstand significant losses in numbers, habitat, or habitat conditions. It is Bureau policy to recognize such species within the State that are so designated, and to develop management prescriptions which will prevent declines to levels requiring the special protection afforded by State or Federal listing. Currently, the Desert Tortoise is the only officially designated sensitive species resident to the CDCA. However, 26 additional species in the CDCA are being reviewed for sensitive species listing (see Table WL-5 at the end of this element). "Crucial Habitats" are portions of the habitats of sensitive species that, if destroyed or modified, could result in their being listed as Rare, Threatened, or Endangered. A crucial habitat of about 2,159,000 acres (including State and private lands) has been determined for the Desert Tortoise. Crucial habitats of species being reviewed for sensitive status have not been delineated.

Significant species: These are species which are not listed as sensitive, Rare, Threatened, or Endangered, but which have more than ordinary value to the American public. These include hunted or fished game species, species with special educational or scientific value, species with commercial value in the pet or fur trades, and selected species which have limited distributions or numbers. The latter are listed in Appendix 3.

The issues which this element addresses are the conflicts between the application of wildlife management principles and the destruction, allocation, or other use of natural resources which comprise major components of wildlife habitats. These issues basically fall into two major categories: (1) expression of need for more wildlife resources in the CDCA in the public poll held in November, 1977, and (2) habitat degradation and fragmentation through (a) competition for renewable resources, and (b) direct, often irreversible, wildlife habitat destruction.

The responses to three separate public opinion polls have shown that more wildlife protection and enhancement is preferred in the California desert, but accomplishment of this aim is often in conflict with other uses of the public lands and their resources.

Where domestic livestock and wildlife coexist, competition for forage, water, space, and other basic resources is often intense. Similarly, populations of wild horses and burros, which are large herbivores and excellent competitors, have exploded in recent years and are taxing the resources in some areas beyond the carrying capacity of the habitat, threatening the vitality of naturally occurring wildlife.

Off-road vehicle (ORV) use generally causes habitat degradation that translates into declines in wildlife species diversity and population levels. This degradation is manifest primarily through soil and vegetation changes, but noise pollution and direct killing of animals also may be important factors for some species. General recreational activities and wildlife resources may conflict when recreationists indulge in either illegal activities or improper and unknowing conduct in areas where wildlife species obtain food, water, or shelter. Mineral and energy development and attendant facilities such as mineral tailing piles, utility corridors, power plants, and pipelines are land-consumptive activities. Because of their long-term effects, these activities frequently eliminate wildlife from areas greater in size than the sites of development.

Agricultural and urban development, military activities, roads and associated conventional vehicle use, and the noise and air pollution associated with many of these activities also contribute to current situations of general habitat decay. Commercial harvesting of plants, animals, and parts thereof has also been disruptive to wildlife populations.

APPROACH

The wildlife element of the Desert Plan is proposed within a framework provided by 1) the Plan Alternatives, 2) the Multiple Use Guidelines, and 3) the Conflict Resolution Criteria. Five basic management tools will be employed to accomplish the objectives of each alternative. Since the wildlife resource is an integral part of wilderness values, the Wilderness Management Plan to be developed for each wilderness area will sometimes include detailed wildlife management prescriptions among its measures. A second tool, the Areas of Critical Environmental Concern (ACEC) Management Prescription, will address wildlife for those ACECs which are designated for or also include important wildlife values. Habitat Management Plans (HMP) are detailed plans developed specifically for wildlife habitats or species which require intensive, active management programs. A fourth tool is the Road Designation Restriction (RDR) in Class L, where the multiple use class guidelines specify that only designated roads are open to vehicle use. Lastly, Special Attention Designations (SA) highlight certain habitats and species for special consideration in the environmental assessments of actions which would adversely affect wildlife resources. Special Attention Designations are not active wildlife management tools.

In addition to the 5 management tools addressed specifically in this element, wildlife management objectives of each alternative will be pursued in grazing allotment management plans (AMPs) and through stipulations used in leases and licenses.

Habitat Management Plans, for the purpose of this element, are appropriate in Class C and Class L, and may also be appropriate in Class M following resolution of conflicts with other resource activities. The numbers of specific Habitat Management Plans, Wilderness Management Plans, and Road Designation Restrictions are constrained by the geographic distribution of the multiple use classes within each alternative.

Within the above framework, wildlife is addressed from both the species and habitat viewpoints. Wildlife species are considered on three biological levels: populations, species, and subspecies. This includes consideration of status with regard to endangerment, i.e., whether a taxon of wildlife is federally (Endangered/Threatened), State (Endangered/Rare), or BLM (sensitive/significant) listed. Management for these species and the habitats discussed will affect other wildlife which is not specifically addressed in the Desert Plan. Those species will, at a minimum, receive the protection afforded by the Multiple Use Guidelines and Conflict Resolution Criteria, as well as consideration in the environmental assessment process.

In many cases, habitats receive special attention through ties to particular wildlife species. Other habitats are considered because they are relict or limited. Certain areas are addressed as representatives of habitats which occur elsewhere but which are in declining condition. Riparian and aquatic habitats are given special status wherever they occur due to their high value to wildlife and their limited extent within the CDCA.

The Desert Plan fits into the overall BLM wildlife program by accomplishing three basic tasks:

❶ Recognizing wildlife species and habitats that clearly merit special consideration in the Bureau's planning and decision-making processes;

❷ Considering the distribution and status of each Endangered, Threatened, Rare, sensitive, and significant species, as well as many unique, limited, relict, or representative habitats within the constraints of the multiple use guidelines; and

❸ Prescribing management tools within the multiple use guidelines to meet the objectives under each alternative of the plan.

It should be noted that stated objectives may not be met for every species, in every multiple use class, under every alternative, but the intent is to do so.

During Desert Plan implementation other processes come into play, the most fundamental of which are the environmental assessment processes and the site-specific components of the BLM wildlife program. These are in addition to the Wilderness Management Plans, ACEC Management Prescriptions, and Road Designation Restrictions mentioned above.

In addition to reviewing the three tasks accomplished by the plan, the environmental assessment process is designed to document both the positive and negative impacts of each proposed land use action on the species and habitats recognized and considered in the Desert Plan, including, especially, the Special Attention designations described above. This will be done on a site-specific basis, and will consider mitigative measures to minimize the effects of the proposed action on wildlife species and habitats.

Finally, Habitat Management Plans, the primary tools of the Bureau's wildlife program, will be used to apply intensive wildlife management principles to maintain or enhance wildlife species and habitats, especially to minimize the chance of official listing of species and the chance of relict, limited, unique, or representative habitats being eliminated.

The management objectives and the management tools proposed to accomplish these objectives for each alternative are presented in the alternative sections of the element. Each alternative contains a table indicating the number and extent of areas in which the various management tools are recommended for each of the wildlife and habitat categories. Element maps are presented for each action alternative, which, with the aid of the map index on Table WL-6, show the location of each type of management proposed for the alternative. (Note that the element maps identify ACECs with the same numeral used for indexing on the multiple use class maps.) Tables WL-5, WL-6, WL-7, and WL-8 at the end of the alternative discussion present more detailed information on wildlife management proposals and compare the varying alternative recommendations.

IMPLEMENTATION ASSUMPTIONS

1 The protection afforded federally and State-listed species will remain the same for all multiple use classes in all alternatives.

2 Future discovery of previously unknown but significant wildlife values may lead to subsequent designation of critical habitat for a federally listed species and in turn, may necessitate a change in multiple use class designation through the plan amendment process.

3 Protective provisions, stipulations, or objectives for wildlife will be considered in all permits, licenses, activity plans, etc., to avoid or minimize habitat deterioration.

4 HMPs are generally not practical in the Intensive Use Class. HMPs proposed for the Moderate Use Class will be given equal consideration with other resource values.

5 HMPs in critical habitat of federally listed species will be completed within three years of final listing or acceptance of the final Desert Plan. They will be revised to incorporate formal recovery plans which may be developed.

6 Inventories for State-listed species will be completed within three years of Desert Plan acceptance or final listing of new species by the State.

7 HMPs for State-listed species will be completed within two years following completion of the inventories prescribed in assumption number 6.

8 A sensitive species list will be maintained, and it will be updated any time data indicate a need for change.

9 Species in the CDCA which are officially proposed for addition to the Federal list of Threatened and Endangered species will be appended to the BLM sensitive species list immediately following the proposal.

10 ACEC Management Prescriptions will be completed within one year following approval of the Desert Plan, and the first phase of implementation will be initiated within one additional year.

11 For those 25 ACECs with significant wildlife values, wildlife objectives will be an integral part of the management prescription.

12 All Road Designation Restrictions for wildlife in Class L will be identified and designated within 7 years following Desert Plan acceptance. As all resource based restrictions are designated in given areas in priority sequence, they will be put in effect immediately.

13 Wildlife objectives will be included in all Wilderness Management Plans and Allotment Management Plans and specific wildlife components developed if necessary.

14 Management of riparian areas will include the options and management practices prescribed in the wildlife and range conflict resolution criteria (see Livestock Grazing Element, Implementation Assumptions).

15 Forage allocations and management practices for Desert Tortoise and Desert Bighorn Sheep will be as prescribed in the wildlife and range conflict resolution criteria (see Livestock Grazing Element, Implementation Assumptions).

16 All water sources existing and developed in the future on public lands will include wildlife as a primary use where appropriate.

17 Monitoring plans for wildlife values will be developed within two years following approval of the Desert Plan.

MONITORING

The purpose of monitoring is to measure at regular intervals and consistent levels the effectiveness of the various management prescriptions in meeting the wildlife objectives of the Desert Plan and to revise management when necessary. While the California Department of Fish and Game focuses primarily on species populations, the Bureau is responsible for habitat management on public lands. However, in practice, populations are so dependent on habitat that management cannot be easily divided. Therefore, monitoring methods for individual management prescriptions may emphasize habitats, species, or a combination of the two.

Monitoring will be conducted to determine status and trend for Endangered, Threatened, Rare, and sensitive species and their habitats. Wildlife habitat condition and trend will be measured in livestock and feral horse and burro range in conjunction with range resource specialists. The adequacy of protective stipulations and mitigation measures in leases, licenses, and permits in safeguarding wildlife resources will be determined through appropriate compliance checks or long-term monitoring. The effectiveness of wildlife habitat management actions incorporated in HMPs, ACEC management Prescriptions, Wilderness Management Plans and activity plans of other resources will be evaluated by incorporating monitoring programs in these plans. Wildlife habitat condition and population trends will be monitored in intensive use areas, such as free-play ORV zones and areas designated for vehicular use on existing roads and ways, to determine the effects of existing management on wildlife resources. Special monitoring plans will be developed to accomplish this.

Actual monitoring techniques used will be dependent on the resource being examined and the nature of the uses in the area. Monitoring will be done in cooperation with other Federal and State agencies and BLM resource specialists when appropriate.

Plan Alternatives

● NO ACTION ALTERNATIVE ●

Relationship to Issues

This alternative is synonymous with "continue present management" and will be used as a comparison to the three "action" alternatives.

Objective

To maintain the present level of wildlife management and compliance with applicable Federal and State law, primarily on a case-by-case basis. This is accomplished by the minimization of negative impacts on wildlife habitat by proposed land use actions through the application of the environment assessment process and consequent stipulations and mitigation. In limited areas, active management plans now completed or proposed as appropriate will be applied to protect or enhance some Special Habitat areas and portions of the habitats of some Federal, State, and BLM sensitive-listed species.

Element Components

Existing Habitat Management Plans on 221,000 acres will continue to protect or enhance the habitats of two federally listed species, one State-listed species and one BLM sensitive species. HMPs on about 2,000 acres will protect or enhance all or part of two Special Habitats. Table WL-1, below, shows the number of areas and acreage extent for which HMPs have been devised for these categories. More detailed information may be found in the "No Action" column of Table WL-5 at the end of this element. A discussion of this alternative's management of these and other categories of wildlife and wildlife habitats follows.

Table WL-1

NO ACTION ALTERNATIVE – SUMMARY OF WILDLIFE MANAGEMENT FOR LISTED SPECIES AND SPECIAL HABITAT AREAS

Species	Habitat Management Plans		Wilderness Management Plan		Areas of Critical Environmental Concern		Road Designation Restrictions		Special Attention Designations	
	Areas	Acres[a] (000)	Areas	Acres (000)	Areas	Acres (000)	Areas	Acres (000)	Areas	Acres (000)
Federally Listed	2	<0.1								
State Listed	1	196								
BLM Sensitive	1	25								
Proposed BLM Sensitive										
Total	4	221								
Special Habitats	2	200							1	86

[a] Acreage estimate on total area and may include private and state lands.

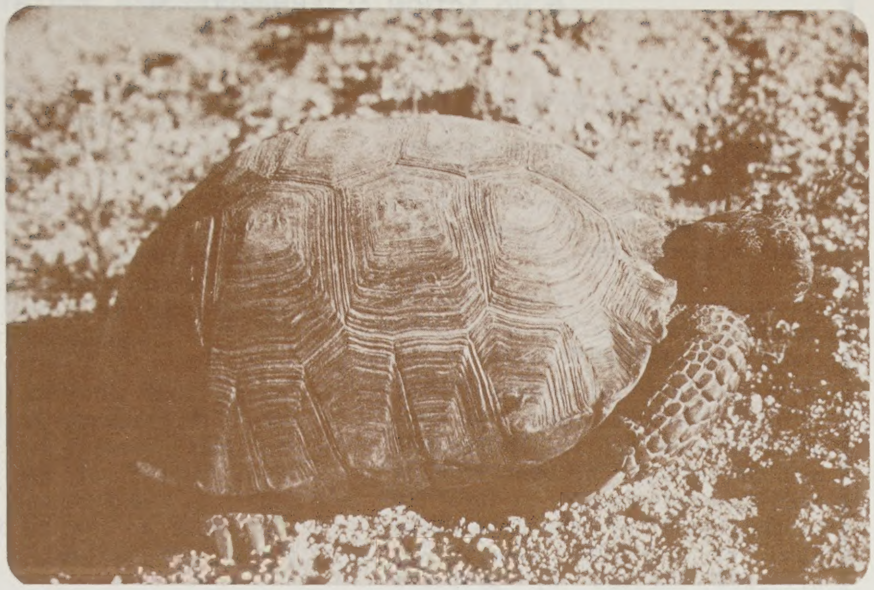
Federally Listed Species. Under existing management there are two HMPs which include management of federally listed species. The Santa Rosa HMP includes the habitat of the Desert Slender Salamander; the other is specifically for the Mohave Chub. Any Federal action which may impact either the habitat or individuals of an Endangered species must be put into formal consultation with the U.S. Fish and Wildlife Service (FWS). Species officially proposed for listing, as well as those under status review, which may be impacted through a Federal action are dealt with through an informal consultation with the FWS. HMPs and other management tools for newly listed species within the CDCA will be developed and implemented as appropriate.

State-listed Species. The Santa Rosa HMP, in the process of completion, prescribes management for the Peninsular Bighorn Sheep. Inventories for the Tehachapi Slender Salamander (a possible CDCA resident) and Mohave Ground Squirrel will be conducted during 1980. Activities impacting State-listed species are addressed through informal consultations with the California Department of Fish and Game and the environmental assessment conducted prior to taking specific actions. Development of HMPs is done on a case-by-case basis for existing or newly listed species.

Sensitive Species. The primary objective is to maintain or enhance current population levels such that Federal or State listing is not required. Consideration is given to the habitat of all sensitive species through the environmental review process and subsequent stipulations and mitigation. Future HMPs may be developed as judged necessary. Because of the proposed Desert Tortoise Natural Area and the fact that the tortoise is an official BLM sensitive species, this species is discussed below in greater detail.

■ Desert Tortoise. Data gathered since 1971 from intensive research and surveys throughout the CDCA have formed the basis for management decisions for this species. Four major population centers (Fremont-Stoddard, Ivanpah, and Fenner-Chemehuevi Valleys; Chuckwalla Bench) and three minor ones (Lucerne, Johnson, and Shadow Valleys) contain densities ranging from 20 to over 250 tortoises per square mile. Parts of these areas have been identified as crucial habitat. These habitats contain populations which were formerly more widespread and dense. Remaining habitat totals 3,200,000 acres, (includes private and State lands) much of which is highly fragmented. Populations in most areas are declining.

Major actions affecting this species on BLM-administered lands in the CDCA are handled on a case-by-case basis. A comprehensive set of policies and guidelines are currently being prepared by the BLM in conjunction with the California Department of Fish and Game. An HMP was recently completed on the 25,000-acre proposed Desert Tortoise Natural Area, which contains high population densities.



Reintroduction of Extirpated Natives. There are no plans to study the feasibility of reintroducing extirpated species to former ranges. Establishing new populations of Endangered, Threatened, or Rare species is done on a case-by-case basis pursuant to established recovery plans and if agreed to by the California Department of Fish and Game, U.S. Fish and Wildlife Service, and BLM.

Game. There are no plans to survey or document the presence or distribution of game animals or their habitats.

Commercially Valuable Species. There are no specific actions planned relating to furbearers and other nongame wildlife of commercial value. Protection, maintenance, and enhancement of populations and habitats of such species is done on a case-by-case basis.

Riparian Areas. Riparian areas are presently managed on a case-by-case basis.

Other Significant Wildlife. Other significant species (Appendix 3) are given the same attention as any other nonlisted species during environmental assessments of project impacts.

Special Habitat Management Areas. Several areas have been designated for protective management of wildlife resources. HMPs have been completed for the Mohave Chub and Desert Tortoise Natural Area and are in preparation for the Santa Rosa Mountains and Koehn Lake. The Picacho Land and Wildlife Management Area is jointly managed by the BLM, U.S. Fish and Wildlife Service, and California Department of Fish and Game to protect wildlife resource values. This is indicated as a Special Attention designation on Tables WL-1 and WL-5. To protect wildlife and other resources sensitive to the effects of ORVs, several areas have been closed to vehicular use (see the No Action Motorized Vehicle Element Map). Only the Desert Tortoise Natural Area has a completed management plan. A management plan for the Jacumba Outstanding Natural Area is in preparation. Management prescriptions have not been written for the remaining areas. Therefore these areas have not been mapped or considered part of the No Action Wildlife Element.

Relationship to Issues

By providing a maximum feasible degree of wildlife protection, this alternative is the strongest response to those public values advocating protection and enhancement of California desert wildlife species and habitats and to the identified biological needs of these species.

> "You must protect rare and endangered species by deignating duplicate habitats where possible to increase their chances for survival."

Objective

To provide for the maximum feasible active wildlife management which will arrest or reverse trends in declining population of Federal, State, and BLM sensitive listed species and species under review for listing. To constrain other resource uses in the area of the habitats of these species or in special habitats, consistent with the overall objectives of the Protection Alternative. In habitats where this active management is not applied, the negative impacts of proposed land use actions will be minimized by the environmental assessment process and consequent stipulations and mitigation.

Element Components

All or portions of the habitats of two federally listed species, three State-listed rare species, one BLM sensitive species, and 22 proposed sensitive species will be protected or enhanced. All or portions of 57 Special Habitat Areas and ACECs will be protected or enhanced. For the various categories of wildlife species and habitats, Table WL-2, below, shows the number and extent of areas in which any of the five wildlife management tools would be applied under this alternative. The "Protection" column of the tables at the end of the element present more detailed information. The Protection Wildlife Element Map and the index on Table WL-6 show where this management would be applied. Details on ACEC management prescriptions may be found on Table AC-1 in the Areas of Critical Environmental Concern section of the plan.

The management description and objectives of the Protection Alternative Wildlife Element for these and other categories of wildlife and habitats are briefly discussed below.

Table WL-2

PROTECTION ALTERNATIVE – SUMMARY OF WILDLIFE MANAGEMENT FOR LISTED SPECIES AND SPECIAL HABITAT AREAS

Species	Habitat Management Plans		Wilderness Management Plan		Areas of Critical Environmental Concern		Road Designation Restrictions		Special Attention Designations	
	Areas	Acres[a] (000)	Areas	Acres (000)	Areas	Acres (000)	Areas	Acres (000)	Areas	Acres (000)
Federally Listed	2	<0.1								
State Listed	2	254			1	<0.1				
BLM Sensitive	5	2,074			1	25				
Proposed BLM Sensitive	22	1,334	24	1,058	17	251	1	90		
Total	31	3,643	24	1,058	19	276	1	90		
Special Habitats	11	1,477	13	355	19	202	14	498	9	444

[a] Acreage estimate of total area and may include private and state lands.

Federally listed Species. The objective is to increase the populations of federally listed species to the point that the protective constraints afforded by the Endangered Species Act (1973, as amended 1978) are no longer necessary for recovery. Potential impacts to such species and their habitats will be put into consultation with the U.S. Fish and Wildlife Service (FWS). The FWS will be consulted informally regarding activities impacting species proposed for Federal listing, as well as species under formal status review. Specific management actions include the following:

① The Mohave Chub HMP will continue to be implemented.

② The Santa Rosa HMP (including habitat of the Desert Slender Salamander) will be completed and implemented.

③ Other HMPs will be developed for newly listed species with significant portions of their habitats on public lands.

State-listed Species. There are two main objectives for State-listed species: 1) to increase population size to the point that the species may be delisted and, 2) to prevent the need for Federal listing. This will be accomplished by preserving and enhancing habitat of State-listed species. Potential impacts on such species or their habitats will be put into informal consultations with the California Department of Fish and Game. Specific management actions will include the following:

① HMP(s) will be developed for the Mohave Ground Squirrel following completion of inventories in 1980.

② The Bureau will complete and implement the Santa Rosa HMP for the Peninsular Bighorn Sheep.

❸ Cooperative agreements with private landowners and State agencies to protect selected areas for the Black Toad will be developed and implemented, including inventories of selected areas for the presence of the toad.

❹ Development and implementation of the Amargosa Canyon ACEC Management Prescription will include protective stipulations for the California Yellow-billed Cuckoo.

❺ Black Rail and Tehachapi Slender Salamander habitats will be addressed through the environmental assessment process.

❻ HMP's will be developed for newly listed species with significant areas of habitat on public land.

Sensitive Species. The primary objective is to maintain or enhance current population levels in classes C and L and to minimize population losses in classes M and I. For some areas the establishment of an ACEC and development of the associated management prescription may be sufficient. If the only necessary management for a species is protection or maintenance of habitat quality, a C or L Class designation may be sufficient. Comprehensive inventories of each sensitive species will be completed if needed to determine the actions necessary. Where existing inventories are adequate, management actions will be prescribed to meet the above objective. Consideration will be given to the habitat of all sensitive species through the normal environmental assessment process and subsequent stipulations and mitigation measures. The following sensitive species and species being considered for sensitive status merit special attention here in the Desert Plan, primarily because inventories allow specific recommendations to be made at this time.

■ Desert Tortoise. All four major population centers and one of three minor centers fall primarily in multiple use classes C and L. HMPs will be prepared for parts of the crucial habitat for the Fremont-Stoddard and Chuckwalla Bench populations and all of the Ivanpah, Chemehuevi, and Shadow Valleys populations. The proposed Desert Tortoise Natural Area will be managed as an ACEC. Some management recommendations have been designed to halt declines and to stabilize or increase remaining populations. Those include limitations and restrictions on grazing and designation of roads.

Livestock forage allocations on 1,280,000 acres of crucial habitat within grazing allotments in classes C and L are designed either to support existing high density populations or to allow existing numbers to increase. Approximately 128,000 acres of crucial habitat within grazing allotments in classes M and I will have forage allocated sufficient to support existing populations. Forage allocations for approximately 320,000 acres of Desert Tortoise habitat outside crucial habitat areas but within grazing allotments will be sufficient to provide for existing populations. In addition, forage available to Desert Tortoises will be increased by special livestock handling techniques, later livestock turnout dates on ephemeral ranges, and forage readiness requirements of 200 pounds dry weight per acre.

■ Desert Bighorn Sheep. Twenty-two populations fall within Class C, three are within Class L, and the remaining nine populations occur within a combination of classes C and L. The eleven declining populations (Argus, Old Dad, Cady, Chuckwalla, Bullion/Sheep Hole, Panamint, Inyo, Granite (Riverside Co.), Hunter/Cottonwood, Coxcomb, Eagle) will have area and herd specific HMPs developed for them (750,000 acres). These eleven herds will receive the highest degree of protection, although activity prohibitions attached to classes C and L will offer protection to herds over their entire range (1,920,000 acres). All herds not proposed for HMPs which fall within Class C will be further protected through the development of Wilderness Management Plans. In addition, three herds occurring within the Clark Mountain, Kingston Mountain, and Inyo Brown Towhee ACECs will be partially protected by those management prescriptions.

In grazing allotments where Bighorn Sheep occur in classes C or L, forage will be allocated for twice the estimated current population to allow for increases. A total of 2,178 AUMs are allocated for Bighorn Sheep under this alternative. Conflict resolutions for allotments where Bighorn Sheep occur are detailed in the Livestock Grazing Element.

■ Panamint Kangaroo Rat. Of the five subspecies of Panamint Kangaroo Rat that have been described, three are isolated with small known distributions and unknown population statuses. These three subspecies are restricted generally to the Argus Mountains, the Panamint Mountains, and the New York Mountains, respectively. Portions of the ranges of these three subspecies fall into areas which afford some protection. A portion of the Argus Mountains subspecies range is included within the Inyo Brown Towhee ACEC and the Argus Mountains HMP area. A portion of the Panamint Mountains subspecies range is included in the West Panamint Canyons HMP area. A portion of the New York Mountains subspecies range is included within the New York Mountains and Cima Dome Wilderness Areas. All of these areas require management plans; additional inventories of these subspecies are necessary to describe their distributions and statuses adequately.

■ Yellow-eared Pocket Mouse. The known distribution lies entirely within a narrow band on the eastern slopes of the Sierra Nevadas in Eastern Kern County. Much of the range is in the CDCA and falls within the East Sierras Wilderness Area and Kelso Valley Special Habitat Areas. The Yellow-eared Pocket Mouse will be of primary concern in the development of the plans required for these two areas. Additional inventories are necessary to describe the distribution and status of this species adequately.

■ Golden Eagle. Protection will be given to 25 known Golden Eagle eyries in the Newberry/Granite Mountains and Red Mountain/El Paso Raptor Breeding Areas for which HMPs will be written. Other known eyries which fall within Wilderness Areas and ACECs and will be given consideration in the plans for these areas.

■ Flat-tailed Horned Lizard. All four high density areas which lie on public lands (Yuha, Borrego Valley, East Mesa, East Algodones Dunes) are within Class L. HMPs will be written for these four areas. In addition, some of the species' habitat may fall within the Coachella Valley Fringe-toed Lizard ACEC. The ACEC Management Prescription will consider the Flat-tailed Horned Lizard as well.

■ Magic Gecko. Additional inventories are necessary to determine the habitat characteristics and distribution of this species more accurately. Based on this information an HMP may be appropriate to properly manage the habitat. This HMP will be developed in cooperation with the California Department of Parks and Recreation, which administers Anza-Borrego State Park, and the California Department of Fish and Game.

■ Inyo Mountain Salamander. This salamander is known only from 12 canyons in the Inyo Mountains. Ten of these, with known suitable habitat covering about 21 acres, lie within the CDCA. Nine of the ten fall within classes C or L; one falls in Class I. The nine canyons will be managed under a single HMP to be developed for the East Slope Inyo Mountains Special Habitat Area.

■ Shoshone Cave Whip-scorpion. To protect this species' unique and restricted habitat, an HMP will be developed. The known distribution falls entirely within Class C.

Reintroduction of Extirpated Natives. Habitat conditions in the Chemehuevi Valley and on the Chuckwalla Bench will be evaluated for potential to support Pronghorn. Likewise, the southern Sierra Nevada near Cross Mountain will be studied as a site for establishing a new population of California Bighorn Sheep, State-listed as Rare. Evaluations will be done in conjunction with the California Department of Fish and Game, and joint HMPs will be prepared if reintroductions are feasible. When feasible, new populations of officially listed species will be established pursuent to approved recovery plans agreed to by the California Department of Fish and Game, U.S. Fish and Wildlife Service, and BLM as appropriate.

Game. The general objective for game management is to maintain and enhance populations and habitats of various game animals for the consumptive and nonconsumptive use by the public. The development of HMPs, guzzlers, habitat manipulations, introductions/reintroductions, etc., will be carried out accordingly to the appropriate conflict resolution criteria. Several game populations occur within proposed HMP areas for other wildlife. Management recommendations for those game populations should be included as an integral part of those management plans. Forage allocations in grazing allotments for deer will be for existing numbers only (see Grazing Element, Implementation Assumptions).

Commercially Valuable Species. The general objective for species with commercial value is to maintain and enhance populations and habitats for the consumptive and nonconsumptive use of the public. This objective will be met within the framework of the appropriate conflict resolution criteria.

Riparian Areas. The general objective for riparian habitat is to preserve and enhance this habitat according to the following multiple use guidelines.

❶ In Class C and Class L, eliminate grazing by fencing significant riparian areas; if adequate water exists, a portion will be piped away for livestock use. Develop other water sources to reduce livestock use on critical riparian areas.

❷ In Class M, develop water sources to reduce livestock use on critical riparian areas and fence off critical portions of significant riparian areas.

❸ In Class I, develop water sources to reduce livestock use on critical riparian areas.

The degree of protection for riparian areas depends upon the distribution and proportion of the various classes by alternative. The Protection Alternative, with a high proportion of C and L classes, gives the highest degree of protection.

Other Significant Species. These species will be specially noted during the environmental assessment process for activities or projects which might affect them.

Special Habitat Management Areas. Fifty-seven Special Habitat Areas will be given special management for wildlife values (Table WL-2). Of these, 13 fall within Class C and will have Wilderness Management Plans developed; these plans will consider wildlife needs. One area (Midland Ironwood Thicket) falls only partially within Class C. Of the 57 areas, 11 will have HMPs developed for them. The Koehn Lake and Santa Rosa HMPs are currently in preparation. Various areas may be combined (e.g., Kelso Valley Oak Woodland and Butterbread and Jawbone Canyons) under one HMP or addressed under more than one HMP (e.g., Chicago Valley Mesquite Thicket).

For 14 areas (including Midland Ironwood Thicket, which is partially included in a wilderness), the Road Designation Restrictions specified according to Class L requirements should be restricted to major thoroughfares and essential access routes. The intent is to minimize vehicle entry to sensitive ecosystems. Nineteen ACECs, common to all action alternatives, are designed for or include Special Habitats.

In addition, 9 areas are noted for Special Attention (SA) in all environmental review processes. These are not active wildlife management tools, as explained previously. The noted wildife values should be considered in all use application decisions and will be covered by appropriate stipulations and mitigation. Some (e.g., West Mojave Saltbush Community) are included in areas for which HMPs are to be developed.

● BALANCED ALTERNATIVE ●

Relationship to Issues

This alternative provides a moderate level of protection to wildlife resources that goes beyond minimum legal constraints, but falls short of the fuller degree of protection and enhancement indicated by public polls.

> "Desert wildlife is unique but seldom seen. The more people learn about these species, the more they will respect their habitat."

Objective

To provide for a general stabilization of populations of listed, sensitive, and selected proposed sensitive species by protecting or enhancing their habitats and selected Special Habitat Areas within a program of balanced multiple use. Tradeoff decisions for use will consider the wildlife resource equal to competing resource values. In habitat areas where active management tools are not applied, the negative impacts to this resource by proposed land use actions will be minimized through application of the environmental assessment process and consequent stipulations and mitigations.

Element Components

All or portions of the habitats of two federally listed species, two State-listed rare species, one BLM sensitive species, and 22 proposed sensitive species will be protected or enhanced. All or portions of 45 Special Habitat Areas will be protected or enhanced. For the various categories of wildlife species and habitats, Table WL-3, below, shows the number and extent of areas in which any of the five management tools would be applied under this alternative. The "Balanced" column of the tables at the end of the element present more detailed information. The Balanced wildlife Element Map and the index on Table WL-6 show where this management would be applied. Details of ACEC management prescriptions are shown on Table AC-1, Areas of Critical Environment Concern section.

The management description and objectives of the Balanced Alternative Wildlife Element for these and other categories of wildlife and habitats are briefly described below.

Table WL-3

BALANCED ALTERNATIVE – SUMMARY OF WILDLIFE MANAGEMENT FOR LISTED SPECIES AND SPECIAL HABITAT AREAS

Species	Habitat Management Plans		Wilderness Management Plan		Areas of Critical Environmental Concern		Road Designation Restrictions		Special Attention Designations	
	Areas	Acres[a] (000)	Areas	Acres (000)	Areas	Acres (000)	Areas	Acres (000)	Areas	Acres (000)
Federally Listed	2	<0.1								
State Listed	1	196			1	<0.1				
BLM Sensitive	4	966			1	25				
Proposed BLM Sensitive	19	949	13	686	17	251	1	90		
Total	26	2,111	13	686	19	276	1	90		
Special Habitats	11	1,122	3	126	19	202	12	267	18	1,174

[a] Acreage estimate on total area and may include private and state lands.

Federally Listed Species. BLM is legally obligated to increase the populations of federally listed species to the point that the protective constraints afforded by the Endangered Species Act are no longer necessary for recovery. Regarding the Mojave Chub, Desert Slender Salamander, and newly listed species, consultation with the U.S. Fish and Wildlife Service and the implementation of HMPs will occur as described in this section of the Protection Alternative.

State-listed Species. There are two main objectives for State-listed species: 1) to increase population sizes to the point that the species may be delisted, and 2) to prevent the need for Federal listing. With regard to the Mojave Ground Squirrel, the Peninsular Bighorn Sheep, Black Toad, the California Yellow-billed Cuckoo, the Black Rail, Tehachapi Slender Salamander and newly listed species, consultation with the California Department of Fish and Game and development and implementation of management prescriptions will occur as described under this section of the Protection Alternative.

Sensitive Species. The primary objective is to maintain or enhance current population levels in classes C and L and to minimize population losses in classes M and I. For some areas, the establishment of an ACEC and development of the associated management prescription may be sufficient. If the only necessary management for a species is protection or maintenance of habitat quality, a C or L Class designation may be sufficient. Comprehensive inventories of each sensitive species will be completed to determine the actions necessary. Where existing inventories are adequate, management actions will be prescribed to meet the above objective. Consideration will be given to the habitat of all sensitive species through the normal environmental assessment process and subsequent stipulations and mitigation measures. The following sensitive species and species being considered for sensitive status merit special attention here in the Desert Plan, primarily because inventories allow specific recommendations to be made at this time.

■ **Desert Tortoise.** Of seven crucial habitat areas, HMPs will be prepared for parts of three major crucial habitat areas and all of one major crucial habitat area. These include: 1) 102,000 acres near Black Mountain of the 704,000 acre Fremont-Stoddard Valley; 2) the entire 339,000 acres in Chemehuevi Valley and 250,000 acres in the Fenner-Piute Valley areas (both of the latter areas are within the 896,000 acres Fenner-Chemehuevi Valley crucial habitat); and 3) 115,000 acres of the 230,000-acre Chuckwalla Bench crucial habitat. The Desert Tortoise Natural Area will be managed as an ACEC.

Some management recommendations have been designed to slow declines and to stabilize or increase remaining populations. These include limitations and restrictions on grazing and designation of roads. Forage allocations will be made to maintain existing high density populations or increase populations on 448,000 acres of crucial habitat within grazing allotments in classes C and L. Forage will be provided to maintain existing populations on 960,000 acres of Desert Tortoise crucial habitat in classes M and I within grazing allotments. Approximately 320,000 acres of noncrucial Desert Tortoise habitat in classes C, L, and M will be allocated forage sufficient to maintain existing populations. Special grazing restrictions to increase the forage available to Desert Tortoises will be identical to those in the Protection Alternative.

■ **Bighorn Sheep.** Ten herds fall within Class C, ten within Class L, and eight within a combination of classes C and L. Of these 28 herds, nine (715,000 acres) are in declining condition and will be managed through HMPs (Hunter/Cottonwood, Coxcomb, Eagle, Chuckwalla, Inyos, Panamints, Argus, Cady, and Bullion/Sheep Hole). The Avawatz herd (7,000 acres), occurring in Class L under this alternative, has been identified as in particularly serious condition and will be managed through an HMP. Three herds fall within a combination of classes C, M, and I, or L and M. The remaining three herds, including two in decline, are within Class M. Thirteen management plans are to be developed for Wilderness Areas (10 herds) and ACECs (3 herds). Of the 15 grazing allotments within Desert Bighorn Sheep range, only two are in classes other than C or L (two have minor portions of M). Some 2,177 AUMs of forage are allocated from these allotments to Bighorn Sheep. The objectives and management prescriptions are essentially the same as under the Protection Alternative and are detailed in the Grazing Element.

■ **Panamint Kangaroo Rat.** Of the five subspecies of Panamint Kangaroo Rat that have been described, three are isolated with small known distributions and unknown population status. These three subspecies are restricted generally to the Argus Mountains, the Panamint Mountains, and the New York Mountains, respectively. Portions of the ranges of these three subspecies fall into areas which afford some protection. A portion of the Argus Mountains subspecies range is included within the Inyo Brown Towhee ACEC and the Argus Mountains HMP area. A portion of the Panamint Mountains subspecies range is included in the West Panamint Canyons HMP area. A portion of the New York Mountains subspecies range is included within the New York Mountains Wilderness Area and the Cima Dome RDR. Most of these areas require management plans; additional inventories of these subspecies are necessary to describe their distributions and status.

■ **Yellow-eared Pocket Mouse.** The known distribution lies entirely within a narrow band on the eastern slopes of the Sierra Nevadas in eastern Kern County. Much of the range is in the CDCA and falls within the East Sierras Canyons Special Habitat Area for which an HMP will be written. The Yellow-eared Pocket Mouse will be of primary concern in the development of the HMP. A portion of the habitat is in a land tenure adjustment area. Additional inventories are necessary to describe the distribution and status adequately.

■ **Golden Eagle.** Protection will be given to 25 Golden Eagle eyries in the Newberry/Granite Mountains and Red Mountain/El Paso Raptor Breeding Areas for which HMPs will be written. Other known eyries which fall within wilderness areas and ACECs and will be given consideration in the plans for these areas.

■ **Flat-tailed Horned Lizard.** Of the four high density areas in the CDCA, only the East Algodones Dunes population lies in Class L. An HMP will be developed for this area. Some of the species habitat may fall within the Coachella Valley Fringe-toed Lizard ACEC. The ACEC Management Prescription will consider the Flat-tailed Horned Lizard as well.

■ **Magic Gecko.** Additional inventories are necessary to determine the habitat characteristics and distribution of this species more accurately. Based on this information, an HMP may be developed to manage the habitat properly. This HMP will be developed in cooperation with the California Department of Parks and Recreation and the California Department of Fish and Game.

■ **Inyo Mountain Salamander.** This salamander is known only from 12 canyons in the Inyo Mountains. Ten of these, with known suitable habitat covering about 21 acres, lie within the CDCA. Nine of the ten fall within Class L; one falls in Class I. The nine canyons will be managed under a single HMP to be developed for the East Slope Inyo Mountains Special Habitat Area.

■ **Shoshone Cave Whip-scorpion.** To protect this species' unique and restricted habitat, an HMP will be developed. The known distribution falls entirely within Class L in this alternative.

Reintroduction of Extirpated Natives. Habitat conditions in the Chemehuevi Valley and on the Chuckwalla Bench will be evaluated for potential to support Pronghorn Antelope. The area considered on the Chuckwalla Bench will be much smaller than under the Protection Alternative due to the geographic distribution of the multiple use classes. When feasible, new populations of officially listed species will be established pursuant to approved recovery plans agreed to by the California Department of Fish and Game, U.S. Fish and Wildlife Service, and BLM, as appropriate.

Game. The general objective for game management is to maintain and enhance populations and habitats of various game animals for the consumptive and nonconsumptive use by the public. The development and implementation of game management will be carried out according to the appropriate conflict resolution criteria (see Protection Alternative, Game, for further discussion).

Commercially Valuable Species. The general objective for species with commercial value is to maintain and enhance populations and habitats for the consumptive and nonconsumptive use by the public. This objective will be met within the framework of the appropriate conflict resolution criteria.

Riparian Areas. Riparian habitat will be preserved and enhanced according to the following multiple use class guidelines:

❶ In classes C and L, eliminate grazing by fencing significant riparian areas; if adequate water exists; a portion will be piped away for livestock use. Develop other water sources to reduce livestock use in critical riparian areas.

❷ In Class M, develop water sources to reduce livestock use on critical riparian areas and fence off critical portions of significant riparian areas.

❸ In Class I, develop water sources to reduce livestock use on critical riparian areas.

The degree of protection for riparian areas depends upon the distribution and proportion of the various classes by alternative.

Special Habitat Management Areas. In this alternative, 45 Special Habitat Areas will be given special management for wildlife values. Of these, only three fall within Class C; these three will have Wilderness Management Plans which consider wildlife values and needs. Eleven of the 45 areas are selected for HMP development and implementation. The Koehn Lake and Santa Rosa Mountains HMPs are currently in preparation.

For 12 areas the road designations (RDRs) specified according to Class L requirements will restrict vehicular use to major throughfares and essential access routes. Vehicle entry will be minimized in order to preserve sensitive wildlife habitat resources. Nineteen ACECs, common to all alternatives, are designed specifically for or include Special Habitats.

In addition, 18 areas are noted for special attention (SA) in all environmental review processes. In these areas wildlife values will be given special consideration in all use application decisions and will be covered by appropriate stipulations and mitigation. Some (e.g., West Mojave Saltbush Community) fall within areas for which HMPs are to be written.

Relationship to Issues

This alternative provides limited protection and management of the wildlife resource to the extent of meeting mandatory protection requirements of State and Federal law, and responds to publics seeking greater use and development in the desert.

> "Wildlife is important but so is man. When they don't get along man should be given a fair share"

Objective

To fulfill the basic legal requirements for protecting and enhancing the habitat of officially listed wildlife species and to provide what additional protection is allowed within a use-oriented multiple use program. Generally, greater weight will be given to the development, production, and consumption of desert resources than to wildlife values in tradeoff decisions. Predominately, negative impacts to wildlife habitat by proposed land use actions will be minimized through the application of the environment assessment process and consequent stipulations and mitigations.

Element Components

All or portions of the habitats of two federally listed species, two State-listed species, one BLM sensitive species will be protectd or enhanced. All or portions of 30 Special Habitat Areas and ACECs will be protected or enhanced.

For each major category of wildlife species and habitats, Table WL-4 below, shows the number and extent of areas in which any of the five management tools would be applied under this alternative. The "Use" Column of the tables at the end of this element present more detailed information. The Use Wildlife Element Map and the index on Table WL-6 show where this management would be applied. Details of ACEC management prescriptions are shown on Table AC-1 in the Areas of Critical Environmental Concern section. Management description and objectives of the Use Alternative Wildlife Element for these and other categories of wildlife and habitats are briefly described below.

Table WL-4

USE ALTERNATIVE – SUMMARY OF WILDLIFE MANAGEMENT FOR LISTED SPECIES AND SPECIAL HABITAT AREAS

Species	Habitat Management Plans		Wilderness Management Plan		Areas of Critical Environmental Concerns		Road Designation Restrictions		Special Attention Designations	
	Areas	Acres[a] (000)	Areas	Acres (000)	Areas	Acres (000)	Areas	Acres (000)	Areas	Acres (000)
Federally Listed	2	<0.1								
State Listed	1	196			1	<0.1				
BLM Sensitive					1	25				
Proposed BLM Sensitive	11	285	5	430	17	251				
Total	14	481	5	430	19	276				
Special Habitats	5	367	2	52	19	202	3	14	30	2,122

[a] Acreage estimate on total area and may include private and state lands.

Federally Listed Species. BLM is legally obligated to increase the populations of federally listed species to the point that the protective constraints afforded by the Endangered Species Act are no longer necessary for recovery. Regarding the Mojave Chub, Desert Slender Salamander, and newly listed species, consultation with the U.S. Fish and Wildlife Service and the implementation of HMPs will occur as described in this element section of the Protection Alternative.

State-listed Species. There are two main objectives for State-listed species: 1) to increase population size to the point that the species may be delisted, and 2) to prevent the need for Federal listing. With regard to the Mojave Ground Squirrel, the Peninsular Bighorn Sheep, Black Toad, the California Yellow-Billed Cuckoo, the Black Rail, Tehachapi Slender Salamander, and newly listed species, consultation with the California Department of Fish and Game and development and implementation of management prescriptions will occur as described under this section of the Protection Alternative.

Sensitive Species. The primary objective is to maintain or enhance current population levels in classes C and L and to minimize population losses in classes M and I. For some areas the establishment of an ACEC and development of the associated management prescription may be sufficient. If the only necessary management for a species is protection or maintenance of habitat quality, a C or L Class designation may be sufficient. Comprehensive inventories of each sensitive species will be completed if needed to determine the actions necessary. Where existing inventories are adequate, management actions will be prescribed to meet the above objectives. Consideration will be given to the habitat of all sensitive species through the normal environmental assessment process and subsequent stipulations and mitigation measures. The following sensitive species and species being reviewed for sensitive status merit special attention here in the Desert Plan, primarily because inventories allow specific recommendations to be made at this time.

■ Desert Tortoise. The Desert Tortoise Natural Area will be protectively managed as an ACEC. There will be no HMPs for any crucial habitat areas. Forage allocations will be made to maintain existing high density populations or increase populations on 16,000 acres of crucial habitat within grazing allotments in classes C and I. Forage will be provided to maintain existing populations on 1,390,000 acres of Desert Tortoise crucial habitat in classes M and I within grazing allotments. Approximately 304,000 acres of noncrucial Desert Tortoise habitat in classes C, L, and M will be allocated sufficient forage to maintain existing populations. No forage allocations will be made for Desert Tortoise on 16,000 acres of noncrucial habitat within livestock grazing allotments. Special grazing restrictions to increase the forage available to Desert Tortoise will be identical to those stipulated in the Protection Alternative.

■ Desert Bighorn Sheep. Under this alternative, five herds occur within Class C. Seven herds fall within Class L, including five in declining condition for which HMPs (460,000 acres) will be developed. Eight herds fall within a combination of classes L, M and I. The remaining fourteen herds fall within classes M or I or a combination of these two. Three herds will be partially protected through ACEC Management Prescriptions. Forage allocations for Bighorn Sheep within M or I classes are for existing populations only. A total of 1,540 AUMs are allocated for Bighorn Sheep under this alternative. Management objectives and prescriptions are detailed in the Grazing Element.

■ Panamint Kangaroo Rat. Of the five subspecies of Panamint Kangaroo Rat that have been described, three are isolated with small known distributions and unknown population status. These three subspecies are restricted generally to the Argus Mountains, the Panamint Mountains, and the New York Mountains, respectively. Small portions of the ranges of these three subspecies fall into areas which afford a slight degree of protection. A portion of the Argus Mountains subspecies range is included within the Inyo Brown Towhee ACEC. A portion of the Panamint Mountains subspecies range is included in the West Panamint Canyons HMP area. Prior to development of the management plans of these areas, additional inventories are necessary to adequately describe their distribution and status.

■ Yellow-eared Pocket Mouse. The known distribution lies entirely within a narrow band on the eastern slopes of the Sierra Nevadas in eastern Kern County. Much of the range is in the CDCA and falls within the East Sierras Canyons Special Habitat Area for which an HMP will be written. The Yellow-eared Pocket Mouse will be of primary concern in the development of the HMP. A portion of the habitat is in a land tenure adjustment area.

■ Flat-tailed Horned Lizard. The Flat-tailed Horned Lizard may occur within the Coachella Valley Fringe-toed Lizard ACEC. If so, the ACEC Management Prescription will consider management of this lizard.

■ Magic Gecko. Additional inventories are necessary to determine the habitat characteristics and distribution of this species more accurately. Based on this information, an HMP may be developed to properly manage the habitat. This HMP will be developed in cooperation with the California Department of Parks and Recreation and the California Department of Fish and Game.

■ Inyo Mountain Salamander. This salamander is known only from 12 canyons in the Inyo Mountains. Ten of these, with known suitable habitat covering about 21 acres, lie within the CDCA. Nine of the ten fall within Class L; one falls in Class I. The nine canyons will be managed under a single HMP to be developed for the East Slope Inyo Mountains Special Habitat Area.

■ Shoshone Cave Whip-scorpion. To protect this species' unique and restricted habitat, an HMP will be developed. The known distribution falls entirely within Class L in this alternative.

Reintroduction of Extirpated Natives. When feasible, new populations of officially listed species will be established pursuant to approved recovery plans agreed to by the California Department of Fish and Game, U.S. Fish and Wildlife Service, and BLM, as appropriate.

Game. The general objective for game management is to maintain and enhance populations and habitats of various game animals for the consumptive and nonconsumptive use by the public. The development and implementation of game management will be carried out according to the appropriate conflict resolution criteria (see Protection Alternative, Game, for further discussion).

Commercially Valuable Species. The general objective for species with commercial value is to maintain and enhance populations for the consumptive and nonconsumptive use by the public. This objective will be met within the framework of the appropriate conflict resolution criteria.

Riparian Areas. Riparian habitat will be preserved and enhanced according to the following multiple use class guidelines:

❶ In classes C and L, eliminate grazing by fencing significant riparian areas; if adequate water exists, a portion will be piped away for livestock use. Develop other water sources to reduce livestock use in critical riparian areas.

❷ In Class M, develop water sources to reduce livestock use on critical riparian areas and fence off critical portions of significant riparian areas.

❸ In Class I, develop water sources to reduce livestock use on critical riparian areas.

The degree of protection for riparian areas depends upon the distribution and proportion of the various classes by alternative.

Special Habitat Management Areas. Twenty-nine Special Habitat Areas will be given special management for wildlife values. Of these, only two fall within Class C; these two will have Wilderness Management Plans which consider wildlife values and needs. Five of the 29 areas are selected for HMP development. Of the five, the Santa Rosa HMP is in preparation. For three areas, the Road Designation Restrictions specified according to Class L requirements will restrict vehicular use to major thoroughfares and essential access routes. Vehicle entry will be minimized in order to preserve sensitive wildlife habitat resources. Nineteen ACECs, common to all alternatives, are designed for or include Special Habitats.

In addition, 33 areas are noted for Special Attention (SA) in all environmental assessment processes. In these areas wildlife values will be given special consideration in all use application decisions and will be covered by appropriate stipulations and mitigation.

● COMPARATIVE ANALYSIS ● OF THE ALTERNATIVES

As indicated in the conflict resolution criteria, classes C and L are oriented toward preservation of scenic, ecological, and cultural resources, whereas classes M and I are oriented toward production for human use. For each alternative, Table WL-7 shows the distribution of habitats of major species groups and of Special Habitat areas for these two class groups. As production classes become more prevalent from the Protection through the Balanced to the Use Alternative, there is a corresponding decrease in the proportion of habitats for wildlife species in the protection-oriented classes C and L. For example, 93 percent of identified Desert Tortoise habitat falls within C and L in the Protection Alternative; 47 percent, in the Balanced Alternative; and 9 percent, in the Use Alternative.

These class distributions constrain the management possibilities. Hence, the proposed management in each alternative, summarized on Table WL-8, shows a decrease in intensity from the most active management efforts (e.g., HMPs and Wilderness Management Plans) in the Protection Alternative to the least active (e.g., Road Designation Restrictions and Special Habitat Designations) in the Use Alternative. For example, Habitat Management Plans for the protection or enhancement of Special Habitats are implemented or proposed for 220,000 acres of the No Action Alternative, 367,000 acres of the Use Alternative, 1,098,000 acres of the Balanced Alternative, and 1,463,000 acres of the Protection Alternative. Table WL-5 compares the differing application of these management tools between the four alternatives, with management type, number, and areal extent broken out for each federally and State-listed species, BLM sensitive species, and proposed sensitive species, and Special Habitat Area. An examination of this table reveals that, while a similar management tool may be proposed in each action alternative for a species habitat or Special Habitat, the areal extent of the management occasionally decreases from the Protection to the Use Alternative. There is, for example, a wilderness management plan proposed for all three action alternatives in the Granite Mountains. The areal extent of this plan decreases from 33,000 acres in the Protection Alternative to 30,000 in the Balanced and 23,000 in the Use. All alternatives provide for the protection or enhancement of varying portions of the habitats of two federally listed species, one State listed rare species, and one BLM sensitive species, in keeping with the requirements of State and Federal wildlife law and policy. Additionally, varying portions of the habitats of two additional State-listed rare species are actively managed in the Protection Alternative, and of one additional State-listed species in both the Balanced and Use Alternatives. Active management is considered for varying portions of two Special Habitat Areas in the No Action Alternative, 29 Special Habitat Areas in the Use Alternative, 45 in the Balanced Alternative and 57 in the Protection Alternative. The number, size, and location of ACECs will be the same in all alternatives.

Table WL-5

COMPARISON OF PROPOSED WILDLIFE MANAGEMENT FOR LISTED SPECIES AND SPECIAL HABITAT AREAS

	No Action Alternative			Protection Alternative			Balanced Alternative			Use Alternative		
	Mgmt[a]	Areas	Acres (000)	Mgmt[a]	Areas	Acres (000)	Mgmt[a]	Areas	Acres (000)	Mgmt[a]	Areas	Acres (000)
FEDERALLY LISTED SPECIES[b]												
Mohave Chub	HMP	1	<0.1	HMP[c]	1	<0.1	HMP[c]	1	<0.1	HMP[c]	1	<0.1
Desert Slender Salamander	HMP	1	<0.1	HMP	1	<0.1	HMP	1	<0.1	HMP	1	<0.1
Brown Pelican				SA			SA			SA		
Aleutian Canada Goose				SA			SA			SA		
Bald Eagle				SA			SA			SA		
Peregrine Falcon				SA			SA			SA		
Yuma Clapper Rail				SA			SA			SA		
STATE-LISTED SPECIES[b]												
Tehachapi Slender Salamander[d]				SA			SA			SA		
Black Toad				SA			SA			SA		
California Black Rail				SA			SA			SA		
California Yellow-billed Cuckoo				ACEC	1	<0.1	ACEC	1	<0.1	ACEC	1	<0.1
Mohave Ground Squirrel				SA			SA			SA		
California Bighorn Sheep				HMP[e]	1	58						
Peninsular Bighorn Sheep	HMP	1	196	HMP	1	196	HMP	1	196	HMP	1	196
BLM SENSITIVE SPECIES												
Desert Tortoise												
Desert Tortoise Natural Area	HMP	1	25	ACEC	1	25	ACEC	1	25	ACEC	1	25
Other Crucial Habitat				HMP	5	2,074	HMP	4	966	SA		
PROPOSED BLM SENSITIVE SPECIES[b]												
Shoshone Cave Whip-scorpion				HMP	1	<0.1	HMP	1	<0.1	HMP	1	<0.1
Andrew's Dune Scarab Beetle				ACEC/ RDR	1 1	37 90	ACEC/ RDR	1 1	37 90	ACEC	1	37
Amargosa River Pupfish				ACEC	1	6	ACEC	1	6	ACEC	1	6
Desert Pupfish				ACEC	2	<0.1	ACEC	2	<0.1	ACEC	2	<0.1
Nevada Speckled Dace				ACEC	1	<0.1	ACEC	1	<0.1	ACEC	1	<0.1
Inyo Mountain Salamander[f]				Wild	1	<0.1	HMP	1	<0.1	HMP	1	<0.1
San Sebastian Leopard Frog				ACEC	1	<0.1	ACEC	1	<0.1	ACEC	1	<0.1
Western Pond Turtle				ACEC	1	<0.1	ACEC	1	<0.1	ACEC	1	<0.1
Magic Gecko				SA			SA			SA		
Flat-tailed Horned Lizard				HMP	4	118	HMP	1	7	SA		
Coachella Valley Fringe-toed Lizard				ACEC	1	3	ACEC	1	3	ACEC	1	3
Golden Eagle				HMP	2	526	HMP/ SA	1 1	222 304	SA	2	560
Osprey				SA			SA			SA		
Elf Owl				ACEC	1	<0.1	ACEC	1	<0.1	ACEC	1	<0.1
Vermillion Flycatcher				ACEC	1	<0.1	ACEC	1	<0.1	ACEC	1	<0.1
Least Bell's Vireo				ACEC	1	<0.1	ACEC	1	<0.1	ACEC	1	<0.1
Summer Tanager				ACEC	1	<0.1	ACEC	1	<0.1	ACEC	1	<0.1
Inyo Brown Towhee				ACEC	1	<0.1	ACEC	1	<0.1	ACEC	1	<0.1
Kingston Mountain Chipmunk				ACEC	1	22	ACEC	1	22	ACEC	1	22
Coachella Round-tailed Ground Squirrel				ACEC	1	3	ACEC	1	3	ACEC	1	3
Yellow-eared Pocket Mouse[g]				HMP/ Wild	1 1	1 55	HMP	1	55	HMP	1	30
Panamint Kangaroo Rat				HMP/ Wild	3 1	16 <0.1	HMP	4	16	HMP	3	1
Amargosa Vole				ACEC	1	<0.1	ACEC	1	<0.1	ACEC	1	<0.1
Desert Bighorn Sheep												
Declining Herd				HMP	11	674	HMP	10	669	HMP	5	354
Other Herds				ACEC Wild	1 21	180 1,003	ACEC Wild	1 13	180 686	ACEC Wild	1 5	180 430
SPECIAL HABITAT AREAS												
Cottonwood Creek				Wild	1	5	SA	1	6	SA	1	6
Deep Springs Valley Shadscale Community				SA	1	10	SA	1	10	SA	1	10
East Slope Inyo Mountains				HMP	1	64	HMP	1	64	HMP	1	64
Saline Valley Dunes				Wild	1	14	RDR	1	14	SA	1	14
Grapevine Canyon				Wild	1	2	SA	1	2	SA	1	2
Panamint Dunes				Wild	1	3						
California Valley Mesquite Thicket				RDR	1	4	SA	1	4	SA	1	4
Lee Flat Shadscale Community				SA	1	33	SA	1	33	SA	1	33
Robber's Roost				RDR	1	3	RDR	1	3	RDR	1	3
Kelso Valley Oak Woodland				HMP	1	21						
West Mojave Saltbush Community				SA	1	186	SA	1	186	SA	1	186
Newberry/Granite Mountains Raptor Breeding				HMP	1	256	HMP	1	222	SA	1	256
Red Mountain/El Paso Raptor Breeding				HMP	1	304	SA	1	304	SA	1	304
Butterbread/Jawbone Canyon				HMP	1	150	SA	1	150	SA	1	150
Koehn Lake	HMP	1	4	HMP	1	4	HMP	1	4			
Upper Amargosa River				RDR	1	3	RDR	1	3	RDR	1	3
West Panamint Canyons				HMP	1	48	HMP	1	48	HMP	1	48
Chicago Valley Mesquite Thicket				RDR	2	10	RDR	2	8	SA	2	10
East Sierra Canyons				Wild	1	112	HMP	1	122	HMP	1	55

Table W/L-5 (cont.)

	No Action Alternative			Protection Alternative			Balanced Alternative			Use Alternative		
	Mgmt[a]	Areas	Acres (000)	Mgmt[a]	Areas	Acres (000)	Mgmt[a]	Areas	Acres (000)	Mgmt[a]	Areas	Acres (000)
Superior Valley Joshua Tree Woodland				SA	1	102	SA	1	102	SA	1	102
Ord Mountains Jojoba Scrub				SA	1	6	SA	1	6	SA	1	6
Little Morongo Canyon Pinyon-Juniper Woodland				SA	1	19	SA	1	19	SA	1	19
Big Morongo Canyon				HMP	1	4	HMP	1	4	HMP	1	4
Granite Mountains				Wild	1	33	Wild	1	30	Wild	1	23
Pisgah Lava Flow				RDR	1	8	SA	1	17	SA	1	17
Stepladder Mountains Teddy Bear Cholla Thicket				Wild	1	25	RDR	1	29	SA	1	29
Chemehuevi Wash				HMP	1	333	HMP	1	333	SA	1	333
Cadiz Dunes				RDR	1	38						
Cima Dome				Wild	1	31	RDR	1	52	SA	1	54
New York Mountains				Wild	1	63	Wild	1	67	SA	1	70
East Cronese Lake				Wild	1	6	RDR	1	6	SA	1	6
Vidal Wash				RDR	1	77	SA	1	77	SA	1	77
Whipple Mountains				Wild	1	29	Wild	1	29	Wild	1	29
Avawatz Mountains				Wild	1	26	HMP	1	26	SA	1	26
Ford Dry Lake				Wild	1	6	HMP	1	6			
Chuckwalla Bench				HMP	1	83	HMP	1	73	SA	1	83
Milpitas Wash,				RDR	1	150	SA	1	150	SA	1	150
Palo Verde Mountains Saguaro				SA	1	2	SA	1	2	SA	1	2
Indian Wash				RDR	1	29	RDR	1	14	SA	1	20
Pinto Wash				RDR	1	9	RDR	1	4	SA	1	9
Smuggler's Cave Southern Chaparral				RDR	1	12	RDR	1	12	RDR	1	8
Midland Ironwood Thicket				RDR	1	44	RDR	1	44	SA	1	44
McCoy Wash				RDR	1	19	SA	1	20			
Palm Oasis				SA	1	<0.1	SA	1	<0.1	SA	3	<0.1
Santa Rosa Mountains	HMP	1	196	HMP	1	196	HMP	1	196	HMP	1	196
Southern Algodones Dunes				RDR	1	92	RDR	1	78			
Picacho Land and Wildlife Mgmt. Area[h]	SA	1	86	SA	1	86	SA	1	86	SA	1	86

[a] HMP — Habitat Management Plans.
ACEC — Area of Critical Environmental Concern.
Wild — Wilderness Management Plans.
RDR — Road Designation Restructions in Class L.
SA — Special Attention during environmental review process.

[b] Federal, State and BLM listed species will receive special attention (SA) throughout their ranges whether inside or outside an HMP, RDR, or ACEC.

[c] Also included in an ACEC.

[d] Recorded only from lands immediately adjacent to CDCA.

[e] HMP will be completed if reintroduction is feasible.

[f] Included within East Slope Inyo Mountains Special Habitat Management Area.

[g] Included in West Panamint Canyon, Argus Range, East Sierra Canyons or Ivanpah Valley Wilderness and/or Habitat Management Plans.

[h] Cooperative agreement among BLM, U.S. Fish and Wildlife Service, and California Department of Fish and Game.

Table W/L-6

COMPARISON OF MANAGEMENT PRESCRIPTION BY ALTERNATIVE MAP LOCATION

Map Number	Location	Management Prescription[a] P	B	U	Federally Listed Species	State Listed Species	Sensitive Species	Proposed BLM Sensitive Species	Other Significant Wildlife	Special Wildlife Habitats
I-1	Cottonwood Creek	Wild	SA	SA						X
I-2	Deep Springs Valley (Shadscale Community)	SA	SA	SA	X				X	X
1	Eureka Valley Dunes	ACEC	ACEC	ACEC					X	X
I-4	East Slope Inyo Mountains	HMP	HMP	HMP				X	X	X
I-5	Saline Valley Dunes	Wild	RDR	SA					X	X
2	Saline Valley/Salt Lake/ Hunter Canyon	ACEC	ACEC	ACEC						X
I-7	Lee Flat (Shadscale Community)	SA	SA	SA						X
I-8	Hunter/Cottonwood Mountain (Bighorn Sheep Habitat)	HMP	HMP	HMP				X		
I-9	Grapevine Canyon	Wild	SA	SA				X	X	X
I-10	Panamint Dunes	Wild							X	X
4	Black Springs	ACEC	ACEC	ACEC						X
3	Darwin Falls	ACEC	ACEC	ACEC						X
I-13	East Sierra Canyons	Wild	HMP	HMP				X		X
I-14	Argus Mountains (Bighorn Sheep Habitat)	HMP	HMP					X		
6	Argus Mountains (Inyo Brown Towhee)	ACEC	ACEC	ACEC				X		
7	Panamint Valley	ACEC	ACEC	ACEC						X
I-17	West Panamint Canyons	HMP	HMP	HMP				X	X	X
I-18	Upper Amargosa River	RDR	RDR	RDR						X
I-19	Shoshone Cave (Whip Scorpion Habitat)	HMP	HMP	HMP				X		
I-20	Chicago Valley (Mesquite Thicket)	RDR	RDR	SA						X
10	Amargosa Canyon	ACEC	ACEC	ACEC		X		X	X	X
I-22	California Valley (Mesquite Thicket)	RDR	SA	SA						X
K-1	Robber's Roost	RDR	RDR	RDR					X	
K-2	Kelso Valley (Oak Woodlands)	HMP						X		X
K-3	Butterbread/Jawbone Canyons	HMP	SA	SA		X		X		X
K-4	Red Mountain/El Paso Mountains (Raptor Breeding Area)	HMP	SA	SA				X		
50	Desert Tortoise Natural Area[b]	ACEC	ACEC	ACEC		X	X			
K-6	Koehn Lake	HMP	HMP							X
K-7	California Bighorn Sheep Reintroduction Area	HMP				X				
S-1	Fremont/Stoddard Valley (Desert Tortoise Crucial Habitat)	HMP	HMP			X	X			
S-2	West Mojave (Saltbush Community)	SA	SA	SA					X	X
S-3	Superior Valley Joshua Tree	SA	SA	SA		X				X
S-4	Newberry/Granite Mountains (Raptor Breeding Area)	HMP	HMP	SA				X	X	X
S-5	Ord Mountains (Jojoba Scrub)	SA	SA	SA						X
S-6	Little Morongo Canyon (Pinyon-Juniper Woodland)	SA	SA	SA						X
S-7	Cady Mountains (Bighorn Sheep Habitat)	HMP						X		
26	Afton Canyon	ACEC	ACEC	ACEC				X	X	X
S-9	East Cronese Lake	Wild	RDR	SA						X
S-10	Avawatz Mountain	Wild	HMP	SA				X		X
12	Salt Springs	ACEC	ACEC	ACEC						X
11	Kingston Mountain	ACEC	ACEC	ACEC				X	X	X
27	Fort Soda	ACEC	ACEC	ACEC	X	X				X
	(Mohave Chub Habitat)[b]	HMP	HMP	HMP	X	X				X
S-14	Shadow Valley (Desert Tortoise Crucial Habitat)	HMP					X			
28	Indian Springs	ACEC	ACEC	ACEC						X
30	Kelso Dunes	ACEC	ACEC	ACEC					X	X
S-17	Granite Mountains	Wild	Wild	Wild				X	X	X
S-18	Old Dad Mountain (Bighorn Sheep Habitat)	HMP						X		
S-19	Bullion Mountain (Bighorn Sheep Habitat)	HMP						X		
S-20	Cima Dome	Wild	RDR	SA					X	X
S-21	Ivanpah Valley (Desert Tortoise Crucial Habitat)	HMP	HMP				X			
S-22	New York Mountains	Wild	Wild	SA				X	X	X
29	Fort Piute	ACEC	ACEC	ACEC						X
S-24	Fenner/Chemehuevi Valley (Desert Tortoise Crucial Habitat)	HMP	HMP				X			
S-25	Stepladder Mountains (Teddy Bear Cholla Thicket)	Wild	RDR	SA						X
S-26	Chemehuevi Wash	HMP	HMP	SA						X

Table W/L-6 (cont.)

Map Number	Location	Management Prescription[a] P	B	U	Federally Listed Species	State Listed Species	Sensitive Species	Proposed BLM Sensitive Species	Other Significant Wildlife	Special Wildlife Habitats
S-27	Whipple Mountains	Wild	Wild	Wild				X		X
S-28	Cadiz Dunes	RDR							X	X
S-29	Vidal Wash	RDR	SA	SA						X
13	Clark Mountain	ACEC	ACEC	ACEC				X	X	X
22	Harper Dry Lake	ACEC	ACEC	ACEC						X
S-32	Pisgah Lava Flow	RDR	SA	SA						X
35	Whitewater Canyon	ACEC	ACEC	ACEC				X		X
36	Fringe-toed Lizard Habitat	ACEC	ACEC	ACEC				X		
R-3	Big Morongo Canyon	HMP	HMP	HMP				X		X
R-4	Palm Oases	SA	SA	SA						
R-5	Santa Rosa Mountains[b]	HMP	HMP	HMP	X	X		X	X	X
41	Salt Creek	ACEC	ACEC	ACEC		X		X		
R-7	Chuckwalla Bench (Desert Tortoise Crucial Habitat)	HMP	HMP	SA			X			
R-8	Chuckwalla Mountains (Bighorn Sheep Habitat)	HMP	HMP					X		
R-9	Chuckwalla Bench	HMP	HMP	SA						X
40	Corn Springs	ACEC	ACEC	ACEC						X
R-11	Granite/Palen Mountains (Bighorn Sheep Habitat)	HMP	HMP					X		
R-12	Midland Ironwood Thicket	RDR	RDR	SA						X
R-13	Ford Dry Lake	Wild	HMP							X
38	Rice Valley Dunes	ACEC	ACEC	ACEC						X
R-15	McCoy Wash	RDR	SA							X
39	Chuckwalla Valley Dunes	ACEC	ACEC	ACEC						X
R-17	Coxcomb Mountains (Bighorn Sheep Habitat)	HMP	HMP	HMP				X		
R-18	Eagle Mountains (Bighorn Sheep Habitat)	HMP	HMP	HMP				X		
P-1	Borrego Valley (Flat-tailed Horned Lizard Habitat)[b]							X	X	
42	San Sebastian Marsh	ACEC	ACEC	ACEC				X		X
P-3	Smuggler's Cave (Southern Chapparal Habitat)	RDR	RDR	RDR					X	X
P-4	Pinto Wash	RDR	RDR	SA						X
P-5	Yuha (Flat-tailed Horned Lizard Habitat)	HMP						X	X	
46	Algodones Dunes	ACEC	ACEC	ACEC				X	X	X
P-7	East Mesa (Flat-tailed Horned Lizard Habitat)	HMP						X	X	
P-8	East Algodones (Flat-tailed Horned Lizard Habitat)	HMP	HMP					X	X	
P-9	Indian Wash	RDR	RDR	SA						X
P-10	Milpitas Wash	RDR	SA	SA						X
P-11	Palo Verde Mountains (Saguaro Habitat)	SA	SA	SA						X
P-12	Southern Algodones Dunes	RDR	RDR					X	X	
P-13	Picacho Land and Wildlife Management Area	SA	SA	SA				X		

[a] HMP — Habitat Management Plans
Wild — Wilderness Management Plans
ACEC — Area of Critical Environmental Concern
RDR — Road Designation Restrictions in Class L
SA — Special Attention Areas

[b] Existing Habitat Management Plan

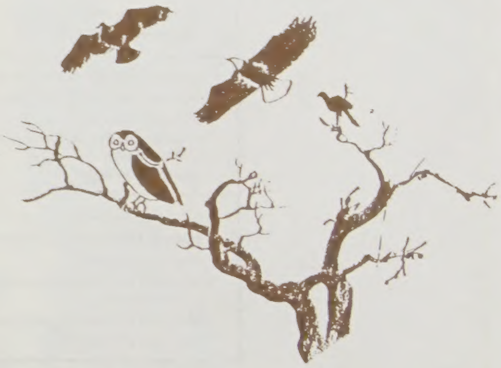


Table W/L-7

SUMMARY COMPARISON OF SPECIES AND HABITATS BY ALTERNATIVE

	Acres (000)								Percent							
	No Action Alternative		Protection Alternative		Balanced Alternative		Use Alternative		No Action Alternative		Protection Alternative		Balanced Alternative		Use Alternative	
Wildlife Categories	C/L Class	M/I Class	C/L Class	M/I Class	C/L Class	M/I Class	C/L Class	M/I Class	C/L Class	M/I Class	C/L Class	M/I Class	C/L Class	M/I Class	C/L Class	M/I Class
Federally Listed Species Habitat																
Fish and Amphibians	<0.1	<0.1	<0.2	0	<0.2	0	1	1	50	50	100	0	100	0	50	50
State Listed Rare Species Habitat																
Fish and Amphibians	22	3	26	0	26	0	19	6	88	12	100	0	100	0	76	24
Peninsular Bighorn Sheep	192	0	160	0	144	6	144	26	100	0	100	0	96	4	85	15
Other	384	960	1,216	240	544	832	64	1,408	29	71	84	16	40	60	4	96
Sensitive Species Habitat																
Fish and Amphibians	13	64	80	0	64	6	38	26	17	83	100	0	91	9	59	41
Desert Tortoise	1,408	1,984	3,200	256	1,600	1,792	320	3,072	42	58	93	7	47	53	9	91
Desert Bighorn Sheep	1,472	1,472	2,752	64	2,368	832	1,280	1,920	50	50	98	2	74	26	40	60
Other	2,304	2,112	3,968	352	3,200	1,408	1,280	3,328	52	48	92	8	69	31	28	72
Significant Species Habitat																
Fish and Amphibians	0	10	10	0	10	0	6	1	0	100	100	0	100	0	86	14
Endemic Dune Beetles	64	96	208	26	144	80	51	160	40	60	89	11	64	36	24	76
Other	2,304	2,240	5,184	464	4,288	1,728	1,408	3,840	51	49	92	8	71	29	27	73

Table WL-8

SUMMARY COMPARISON OF WILDLIFE MANAGEMENT PLANS FOR LISTED SPECIES AND SPECIAL HABITATS BY PLAN ALTERNATIVE

	No Action Alternative		Protection Alternative		Balanced Alternative		Use Alternative	
	No. of Areas	Acres (000)	No. of Areas	Acres (000)	No. of Areas	Acres (000)	No. of Areas	Acres (000)
Federally Listed Species								
Managed by HMP[a]	2	<0.1	2	<0.1	2	<0.1	2	<0.1
Managed by ACEC								
State Listed Species								
Managed by HMP[b]	1	196	2	254	1	196	1	196
Managed by ACEC			1	<0.1	1	<0.1	1	<0.1
BLM Sensitive Species								
Managed by HMP	1	25	5	2,074	4	966		
Managed by ACEC			1	25	1	25	1	25
Proposed BLM Sensitive Species								
Managed by Wilderness Mgmt Plan			24	1,058	13	686	5	430
Managed by HMP			22	1,315	19	949	11	285
Managed by Road Designation Restriction			1	90	1	90		
Managed by ACEC			17	251	17	251	17	251
Special Habitat Areas								
Managed by Wilderness Mgmt Plan			13	355	3	126	2	52
Managed by HMP	2	200	11	1,463	11	1,098	5	367
Managed by Road Designation Restriction			14	498	12	267	3	14
Managed by Special Attention			9	444	18	1,174	33	2,108
Managed by ACEC[c]			19	202	19	202	19	202

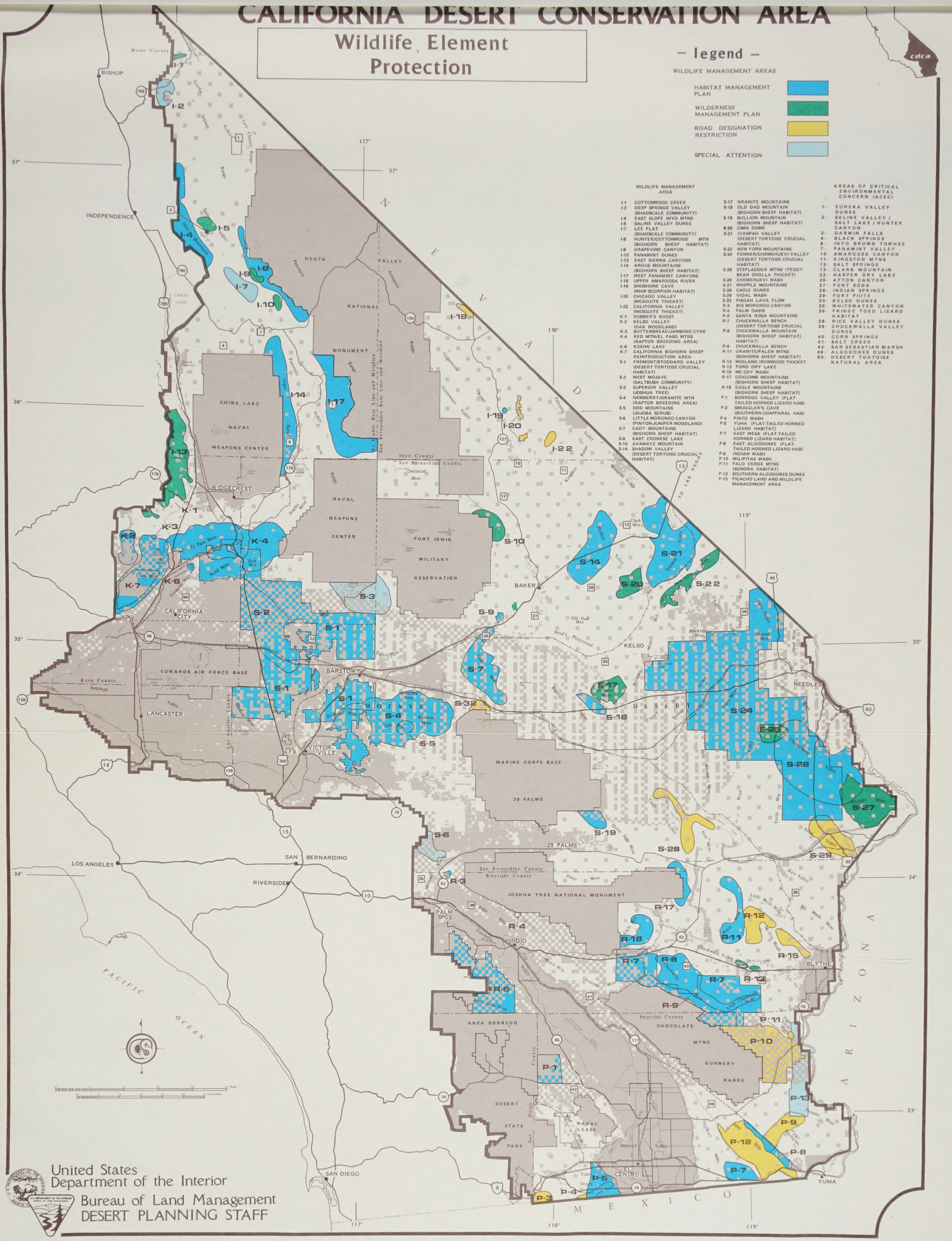
[a] The Desert Slender Salamander, included here, falls within the Santa Rosa HMP which is included in Special Habitat Areas.

[b] The Peninsular Bighorn Sheep, included here, falls within the Santa Rosa HMP which is included in Special Habitat Areas.

[c] Not including those designated specifically for a single species.

CALIFORNIA DESERT CONSERVATION AREA

Wildlife Element Protection


cdca
Mono County
BISHOP
168
I-1
I-2
Eureka
Saline
Valley
Last Chance Range
INDEPENDENCE
I-4
I-5
I-7
I-8
I-9
I-10
I-13
I-14
I-17
I-18
I-19
I-20
I-22
DEATH VALLEY NATIONAL MONUMENT
Panamint
Amargosa
Argus Range
Panamint Valley
Greenwater Range
Greenwater Valley
Resting Spring Range
Pahrump Valley
Kingston Range
Mesquite Valley
Mt. Diablo Base Line and Meridian
San Bernardino Base Line and Meridian
NEVADA
TO LAS VEGAS
117°
116°
115°
37°
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33°
CHINA LAKE NAVAL WEAPONS CENTER
RIDGECREST
Inyo County
San Bernardino County
Owlshead Mtns
NAVAL WEAPONS CENTER
FORT IRWIN MILITARY RESERVATION
K-1
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K-7
El Paso Mtns
Rand Mtns
Red Mtn
Cross Mtn
Fremont Valley
CALIFORNIA CITY
Kern County
Antelope Valley
EDWARDS AIR FORCE BASE
LANCASTER
Los Angeles County
Shadow Mtns
Black Mtn
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BARSTOW
Calico Mtns
Newberry Mtns
Rodman Mtns
Ord Mtns
Stoddard Mtns
MOJAVE
DESERT
VICTORVILLE
GEO. A.F.B.
BAKER
Devil's Playground
Old Dad Mtn
KELSO
Granite Mtns
Clark Mtn
Ivanpah Valley
Shadow Valley
Hackberry Mtns
Piute Valley
Homer Mtn
Dead Mtns
NEEDLES
Sacramento Mtns
Chemehuevi Valley
Whipple Mtns
Vidal Valley
Turtle Mtns
Old Woman Mtns
Ship Mtns
Iron Mtns
Cadiz Valley
Sheep Hole Mtns
MARINE CORPS BASE 29 PALMS
29 PALMS
LOS ANGELES
SAN BERNARDINO
RIVERSIDE
San Bernardino County
Riverside County
JOSHUA TREE NATIONAL MONUMENT
Pinto Mtns
Rice Valley
Little Maria Mtns
Big Maria Mtns
PALM SPGS
Indio Hills
INDIO
Coachella Valley
Santa Rosa Mtns
Mecca Hills
Orocopia Mtns
Chuckwalla Mtns
Little Chuckwalla Mtns
Chuckwalla Valley
Mc Coy Mtns
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Imperial County
CHOCOLATE MTNS GUNNERY RANGE
ANZA BORREGO DESERT STATE PARK
San Diego County
SALTON SEA
NAVAL LEASE
Imperial Valley
EL CENTRO
Sand Hills
Cargo Muchacho Mtns
YUMA
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SAN DIEGO
PACIFIC OCEAN
ARIZONA
MEXICO
Miles
Kilometers
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Map Labels 1 2 3 4 6 7 10 11 12 13 22 26 27 28 29 30 35 36 38 39 40 41 42 46 50

- legend -

WILDLIFE MANAGEMENT AREAS

HABITAT MANAGEMENT PLAN	🟦
WILDERNESS MANAGEMENT PLAN	🟩
ROAD DESIGNATION RESTRICTION	🟨
SPECIAL ATTENTION	🟦

WILDLIFE MANAGEMENT AREA

I-1	COTTONWOOD CREEK
I-2	DEEP SPRINGS VALLEY (SHADSCALE COMMUNITY)
I-4	EAST SLOPE INYO MTNS
I-5	SALINE VALLEY DUNES
I-7	LEE FLAT (SHADSCALE COMMUNITY)
I-8	HUNTER/COTTONWOOD MTN (BIGHORN SHEEP HABITAT)
I-9	GRAPEVINE CANYON
I-10	PANAMINT DUNES
I-13	EAST SIERRA CANYONS
I-14	ARGUS MOUNTAINS (BIGHORN SHEEP HABITAT)
I-17	WEST PANAMINT CANYONS
I-18	UPPER AMARGOSA RIVER
I-19	SHOSHONE CAVE (WHIP SCORPION HABITAT)
I-20	CHICAGO VALLEY (MESQUITE THICKET)
I-22	CALIFORNIA VALLEY (MESQUITE THICKET)
K-1	ROBBER'S ROOST
K-2	KELSO VALLEY (OAK WOODLAND)
K-3	BUTTERBREAD/JAWBONE CYNS
K-4	RED MTN/EL PASO MTNS (RAPTOR BREEDING AREA)
K-6	KOEHN LAKE
K-7	CALIFORNIA BIGHORN SHEEP REINTRODUCTION AREA
S-1	FREMONT/STODDARD VALLEY (DESERT TORTOISE CRUCIAL HABITAT)
S-2	WEST MOJAVE (SALTBUSH COMMUNITY)
S-3	SUPERIOR VALLEY (JOSHUA TREE)
S-4	NEWBERRY/GRANITE MTN (RAPTOR BREEDING AREA)
S 5	ORD MOUNTAINS (JOJOBA SCRUB)
S-6	LITTLE MORONGO CANYON (PINYON-JUNIPER WOODLAND)
S-7	CADY MOUNTAINS (BIGHORN SHEEP HABITAT)
S-9	EAST CRONESE LAKE
S-10	AVAWATZ MOUNTAIN
S-14	SHADOW VALLEY (DESERT TORTOISE CRUCIAL HABITAT)
S-17	GRANITE MOUNTAINS
S-18	OLD DAD MOUNTAIN (BIGHORN SHEEP HABITAT)
S-19	BULLION MOUNTAIN (BIGHORN SHEEP HABITAT)
S-20	CIMA DOME
S-21	IVANPAH VALLEY (DESERT TORTOISE CRUCIAL HABITAT)
S-22	NEW YORK MOUNTAINS
S-24	FENNER/CHEMEHUEVI VALLEY (DESERT TORTOISE CRUCIAL HABITAT)
S-25	STEPLADDER MTNS (TEDDY BEAR CHOLLA THICKET)
S-26	CHEMEHUEVI WASH
S-27	WHIPPLE MOUNTAINS
S-28	CADIZ DUNES
S-29	VIDAL WASH
S-32	PISGAH LAVA FLOW
R-3	BIG MORONGO CANYON
R-4	PALM OASIS
R-5	SANTA ROSA MOUNTAINS
R-7	CHUCKWALLA BENCH (DESERT TORTOISE CRUCIAL
R-8	CHUCKWALLA MOUNTAIN (BIGHORN SHEEP HABITAT) HABITAT)
R-9	CHUCKWALLA BENCH
R-11	GRANITE/PALEN MTNS (BIGHORN SHEEP HABITAT)
R-12	MIDLAND IRONWOOD THICKET
R-13	FORD DRY LAKE
R-15	MC COY WASH
R-17	COXCOMB MOUNTAINS (BIGHORN SHEEP HABITAT)
R-18	EAGLE MOUNTAINS (BIGHORN SHEEP HABITAT)
P-1	BORREGO VALLEY (FLAT-TAILED HORNED LIZARD HAB)
P-3	SMUGGLER'S CAVE (SOUTHERN CHAPPARAL HAB)
P-4	PINTO WASH
P-5	YUHA (FLAT-TAILED HORNED LIZARD HABITAT)
P-7	EAST MESA (FLAT-TAILED HORNED LIZARD HABITAT)
P-8	EAST ALGODONES (FLAT-TAILED HORNED LIZARD HAB)
P-9	INDIAN WASH
P-10	MILIPITAS WASH
P-11	PALO VERDE MTNS (SONORA HABITAT)
P-12	SOUTHERN ALGODONES DUNES
P-13	PICACHO LAND AND WILDLIFE MANAGEMENT AREA

AREAS OF CRITICAL ENVIRONMENTAL CONCERN (ACEC)

1-	EUREKA VALLEY DUNES
2-	SALINE VALLEY / SALT LAKE / HUNTER CANYON
3-	DARWIN FALLS
4-	BLACK SPRINGS
6-	INYO BROWN TOWHEE
7-	PANAMINT VALLEY
10-	AMARGOSA CANYON
11-	KINGSTON MTNS
12-	SALT SPRINGS
13-	CLARK MOUNTAIN
22-	HARPER DRY LAKE
26-	AFTON CANYON
27-	FORT SODA
28-	INDIAN SPRINGS
29-	FORT PIUTE
30-	KELSO DUNES
35-	WHITEWATER CANYON
36-	FRINGE TOED LIZARD HABITAT
38-	RICE VALLEY DUNES
39-	CHUCKWALLA VALLEY DUNES
40-	CORN SPRINGS
41-	SALT CREEK
42-	SAN SEBASTIAN MARSH
46-	ALGODONES DUNES
50-	DESERT TORTOISE NATURAL AREA

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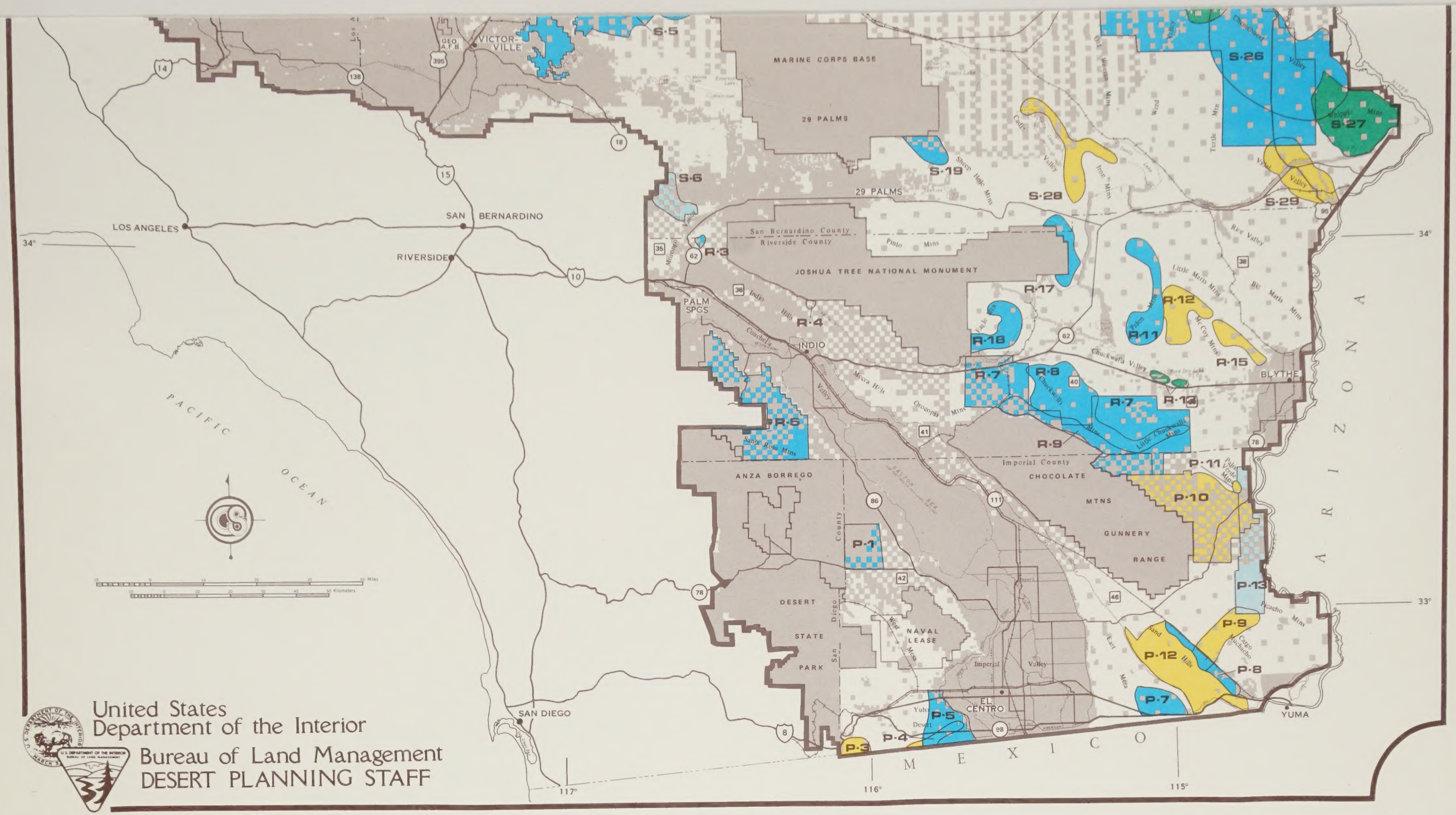
DESERT PLANNING STAFF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MARINE CORPS BASE
29 PALMS
29 PALMS
San Bernardino County
Riverside County
Imperial County
San Diego County
JOSHUA TREE NATIONAL MONUMENT
ANZA BORREGO DESERT STATE PARK
CHOCOLATE MTNS GUNNERY RANGE
NAVAL LEASE
SALTON SEA
LOS ANGELES
SAN BERNARDINO
RIVERSIDE
VICTORVILLE
GEO. A.F.B.
PALM SPGS
INDIO
BLYTHE
EL CENTRO
SAN DIEGO
YUMA
A R I Z O N A
M E X I C O
PACIFIC OCEAN
Old Woman Mtns
Turtle Mtn
Chemehuevi Valley
Whipple Mtns
Cadiz Valley
Iron Mtns
Sheep Hole Mtns
Pinto Mtns
Vidal Valley
Rice Valley
Little Maria Mtns
Big Maria Mtns
McCoy Mtns
Palen Mtns
Eagle Mtns
Chuckwalla Valley
Chuckwalla Mtns
Little Chuckwalla Mtns
Orocopia Mtns
Mecca Hills
Indio Hills
Coachella Valley
Santa Rosa Mtns
Palo Verde Mtns
Picacho Mtns
Cargo Muchacho
Sand Hills
East Mesa
West Mesa
Imperial Valley
Yuha Desert
Morongo
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Bureau of Land Management
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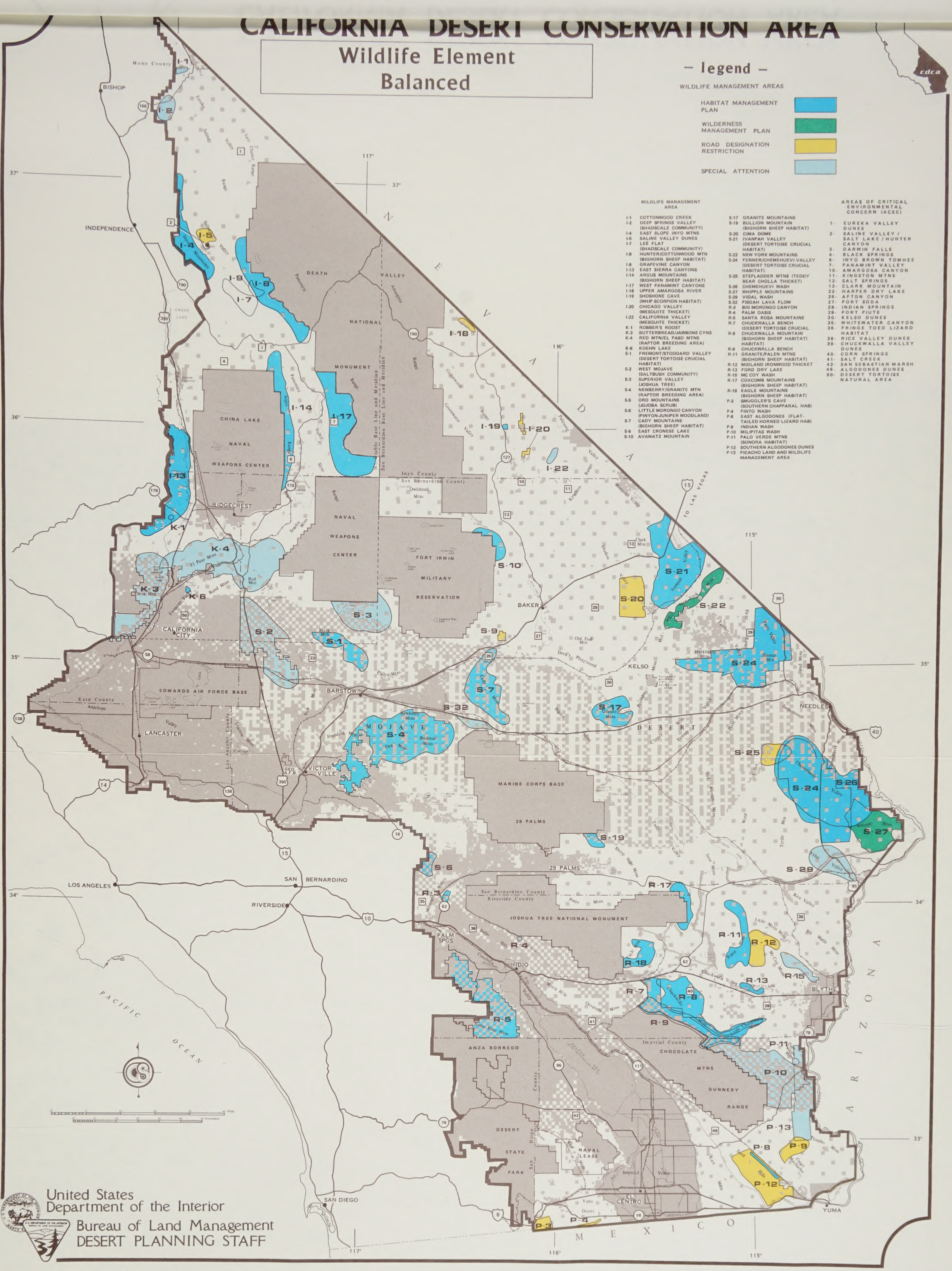
CALIFORNIA DESERT CONSERVATION AREA

Wildlife Element
Balanced


cdca
Mono County
BISHOP
INDEPENDENCE
RIDGECREST
CALIFORNIA CITY
LANCASTER
VICTORVILLE
BARSTOW
BAKER
KELSO
NEEDLES
29 PALMS
SAN BERNARDINO
RIVERSIDE
LOS ANGELES
PALM SPGS
INDIO
BLYTHE
EL CENTRO
YUMA
SAN DIEGO
PACIFIC OCEAN
N E V A D A
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M E X I C O
DEATH VALLEY NATIONAL MONUMENT
CHINA LAKE NAVAL WEAPONS CENTER
NAVAL WEAPONS CENTER
FORT IRWIN MILITARY RESERVATION
EDWARDS AIR FORCE BASE
MARINE CORPS BASE 29 PALMS
JOSHUA TREE NATIONAL MONUMENT
ANZA BORREGO DESERT STATE PARK
CHOCOLATE MTNS GUNNERY RANGE
NAVAL LEASE
M O J A V E
D E S E R T
Kern County
Inyo County
San Bernardino County
Riverside County
Imperial County
Los Angeles County
San Diego County
San Bernardino Base Line and Meridian
Mount Diablo Base Line and Meridian
TO LAS VEGAS
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Miles
Kilometers

– legend –

WILDLIFE MANAGEMENT AREAS

HABITAT MANAGEMENT PLAN	🟦
WILDERNESS MANAGEMENT PLAN	🟩
ROAD DESIGNATION RESTRICTION	🟨
SPECIAL ATTENTION	🟦

WILDLIFE MANAGEMENT AREA

I-1	COTTONWOOD CREEK
I-2	DEEP SPRINGS VALLEY (SHADSCALE COMMUNITY)
I-4	EAST SLOPE INYO MTNS
I-5	SALINE VALLEY DUNES
I-7	LEE FLAT (SHADSCALE COMMUNITY)
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I-9	GRAPEVINE CANYON
I-13	EAST SIERRA CANYONS
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K-3	BUTTERBREAD/JAWBONE CYNS
K-4	RED MTN/EL PASO MTNS (RAPTOR BREEDING AREA)
K-6	KOEHN LAKE
S-1	FREMONT/STODDARD VALLEY (DESERT TORTOISE CRUCIAL HABITAT)
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S-3	SUPERIOR VALLEY (JOSHUA TREE)
S-4	NEWBERRY/GRANITE MTN (RAPTOR BREEDING AREA)
S-5	ORD MOUNTAINS (JOJOBA SCRUB)
S-6	LITTLE MORONGO CANYON (PINYON-JUNIPER WOODLAND)
S-7	CADY MOUNTAINS (BIGHORN SHEEP HABITAT)
S-9	EAST CRONESE LAKE
S-10	AVAWATZ MOUNTAIN
S-17	GRANITE MOUNTAINS
S-19	BULLION MOUNTAIN (BIGHORN SHEEP HABITAT)
S-20	CIMA DOME
S-21	IVANPAH VALLEY (DESERT TORTOISE CRUCIAL HABITAT)
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S-24	FENNER/CHEMEHUEVI VALLEY (DESERT TORTOISE CRUCIAL HABITAT)
S-25	STEPLADDER MTNS (TEDDY BEAR CHOLLA THICKET)
S-26	CHEMEHUEVI WASH
S-27	WHIPPLE MOUNTAINS
S-29	VIDAL WASH
S-32	PISGAH LAVA FLOW
R-3	BIG MORONGO CANYON
R-4	PALM OASIS
R-5	SANTA ROSA MOUNTAINS
R-7	CHUCKWALLA BENCH (DESERT TORTOISE CRUCIAL
R-8	CHUCKWALLA MOUNTAIN (BIGHORN SHEEP HABITAT) HABITAT)
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R-12	MIDLAND IRONWOOD THICKET
R-13	FORD DRY LAKE
R-15	MC COY WASH
R-17	COXCOMB MOUNTAINS (BIGHORN SHEEP HABITAT)
R-18	EAGLE MOUNTAINS (BIGHORN SHEEP HABITAT)
P-3	SMUGGLER'S CAVE (SOUTHERN CHAPPARAL HAB)
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P-8	EAST ALGODONES (FLAT-TAILED HORNED LIZARD HAB)
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P-10	MILIPITAS WASH
P-11	PALO VERDE MTNS (SONORA HABITAT)
P-12	SOUTHERN ALGODONES DUNES
P-13	PICACHO LAND AND WILDLIFE MANAGEMENT AREA

AREAS OF CRITICAL ENVIRONMENTAL CONCERN (ACEC)

1-	EUREKA VALLEY DUNES
2-	SALINE VALLEY / SALT LAKE / HUNTER CANYON
3-	DARWIN FALLS
4-	BLACK SPRINGS
6-	INYO BROWN TOWHEE
7-	PANAMINT VALLEY
10-	AMARGOSA CANYON
11-	KINGSTON MTNS
12-	SALT SPRINGS
13-	CLARK MOUNTAIN
22-	HARPER DRY LAKE
26-	AFTON CANYON
27-	FORT SODA
28-	INDIAN SPRINGS
29-	FORT PIUTE
30-	KELSO DUNES
35-	WHITEWATER CANYON
36-	FRINGE TOED LIZARD HABITAT
38-	RICE VALLEY DUNES
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41-	SALT CREEK
42-	SAN SEBASTIAN MARSH
46-	ALGODONES DUNES
50-	DESERT TORTOISE NATURAL AREA

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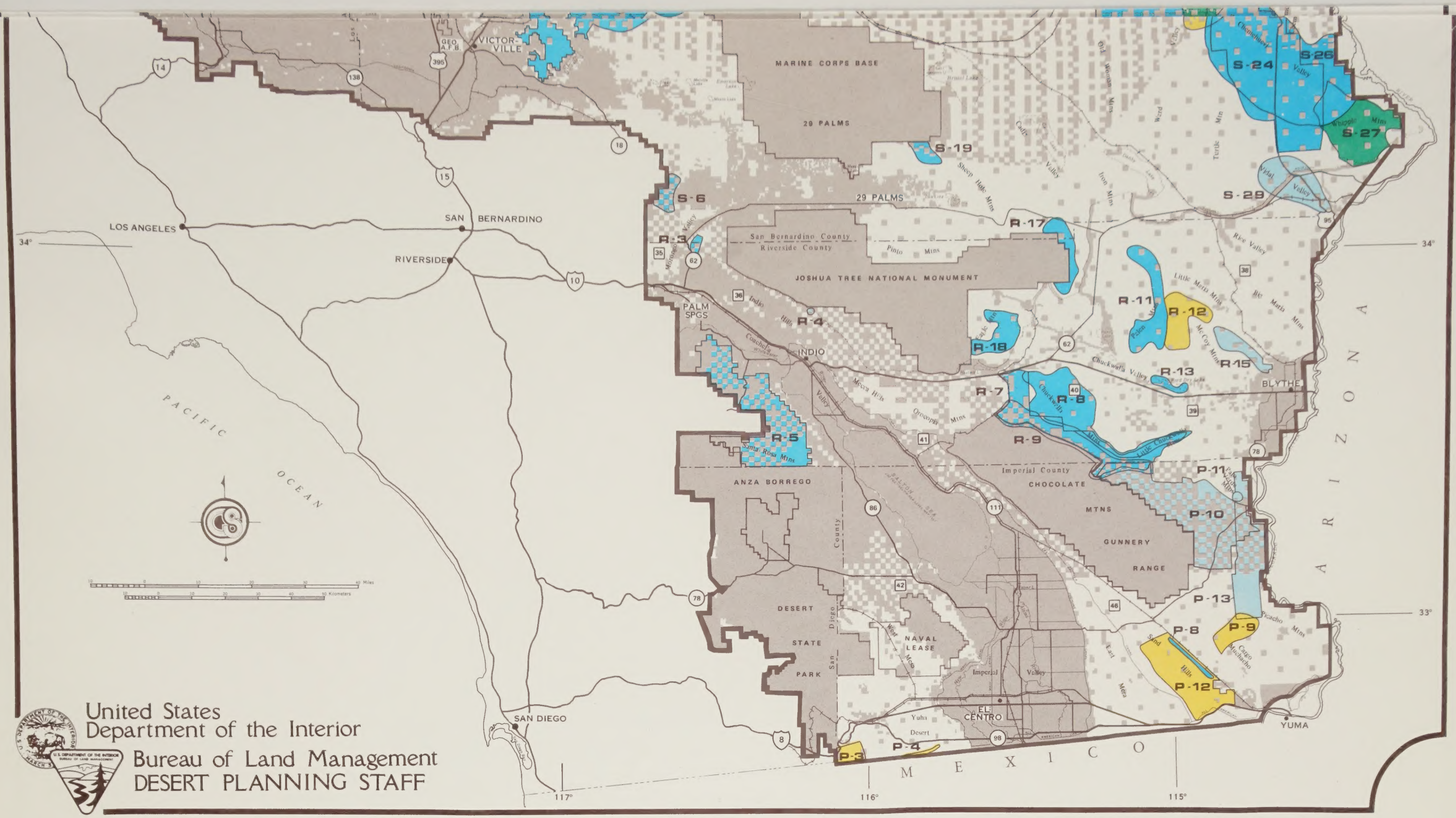
Department of the Interior
Bureau of Land Management
DESERT PLANNING STAFF


MARINE CORPS BASE
29 PALMS
JOSHUA TREE NATIONAL MONUMENT
San Bernardino County
Riverside County
Imperial County
San Diego County
ANZA BORREGO DESERT STATE PARK
CHOCOLATE MTNS GUNNERY RANGE
NAVAL LEASE
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LOS ANGELES
SAN BERNARDINO
RIVERSIDE
VICTORVILLE
GEO A.F.B.
29 PALMS
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SAN DIEGO
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PACIFIC OCEAN
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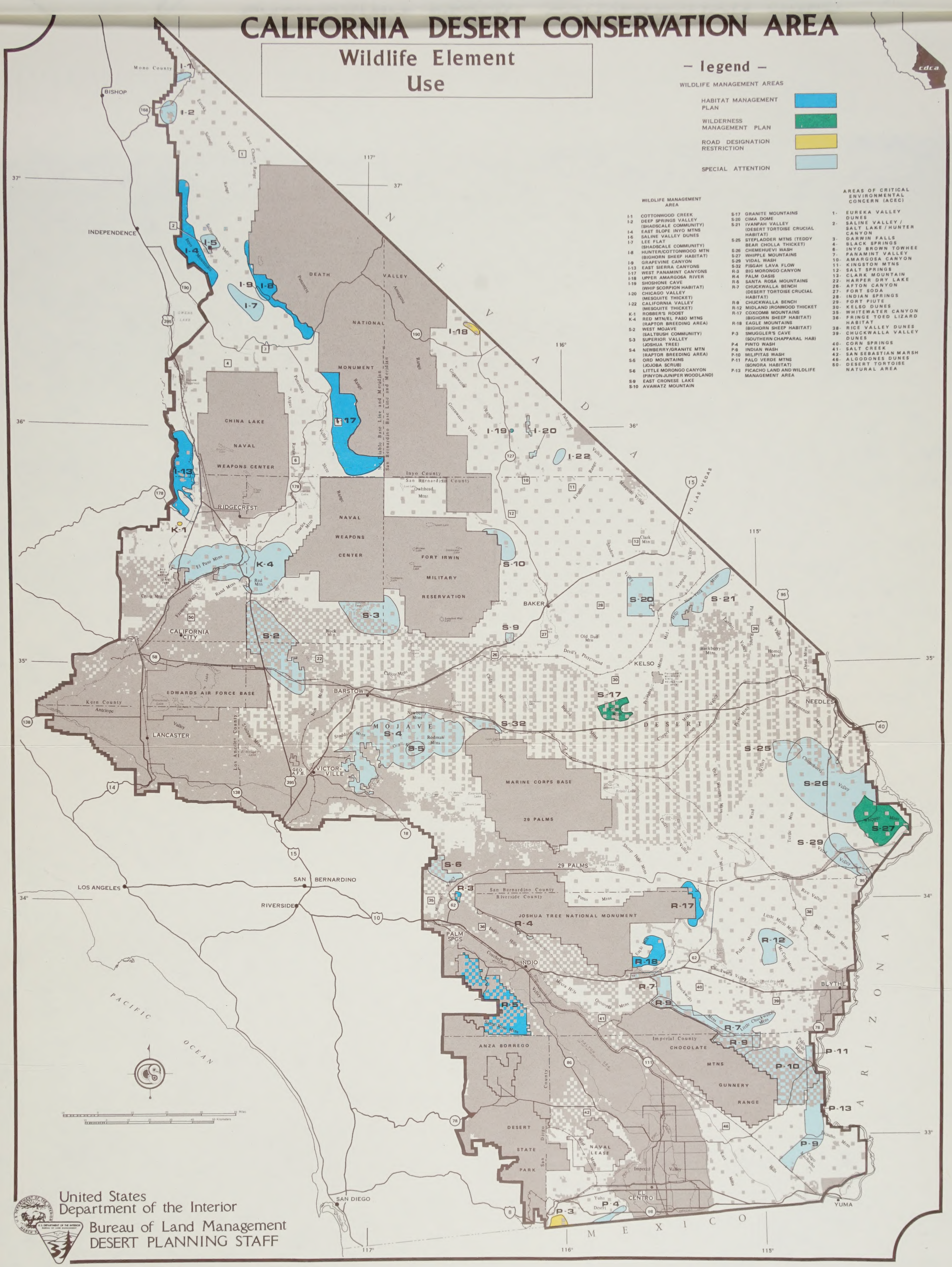
United States
Department of the Interior
Bureau of Land Management
DESERT PLANNING STAFF

CALIFORNIA DESERT CONSERVATION AREA

Wildlife Element
Use


cdca
Mono County
BISHOP
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I-1
I-2
Eureka
Saline
Valley
Last Chance Range
37°
117°
INDEPENDENCE
I-4
I-5
I-7
I-9
I-8
Inyo Mountains
190
395
OWENS LAKE
DEATH
VALLEY
NATIONAL
MONUMENT
Panamint
Range
Amargosa
I-17
I-18
NEVADA
116°
Pahrump
Valley
I-19
I-20
I-22
36°
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CHINA LAKE
NAVAL
WEAPONS CENTER
I-13
178
RIDGECREST
K-1
Searles
Slate
Argus
Inyo County
San Bernardino County
Owlshead Mtns
Kingston Range
Mesquite Valley
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TO LAS VEGAS
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WEAPONS
CENTER
FORT IRWIN
MILITARY
RESERVATION
K-4
El Paso Mtns
Red Mtn
Rand Mtns
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Clark Mtn
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Ivanpah
Valley
New York Mtns
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BAKER
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CALIFORNIA
CITY
Fremont Valley
Cima Mtn
Old Dad Mtn
Devil's Playground
KELSO
Providence
Hackberry Mtn
Homer Mtn
Dead Mtns
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Black Mtn
Calico Mtns
BARSTOW
EDWARDS AIR FORCE BASE
Kern County
Antelope
Valley
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Los Angeles County
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Granite Mtns
Bristol Mtns
Cady Mtns
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Newberry Mtns
Rodman Mtns
Ord Mtns
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DESERT
Old Woman Mtns
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Chemehuevi
Valley
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Whipple Mtns
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Vidal Valley
GEORGE A.F.B.
VICTORVILLE
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MARINE CORPS BASE
29 PALMS
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29 PALMS
Sheep Hole Mtns
Turtle Mtn
Iron Mtns
LOS ANGELES
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RIVERSIDE
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San Bernardino County
Riverside County
Pinto Mtns
JOSHUA TREE NATIONAL MONUMENT
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Eagle Mtns
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Little Maria Mtns
McCoy Mtns
Palen Mtns
PALM SPGS
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Chuckwalla Valley
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Santa Rosa Mtns
Mecca Hills
Orocopia Mtns
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Little Chuckwalla Mtns
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78
ARIZONA
ANZA BORREGO
Imperial County
CHOCOLATE
MTNS
GUNNERY
RANGE
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San Diego County
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DESERT
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Imperial
Valley
Sand Hills
Cargo Muchacho Mtns
SAN DIEGO
8
P-3
P-4
Yuha Desert
EL CENTRO
98
YUMA
MEXICO
117°
116°
115°
Miles
Kilometers

— legend —

WILDLIFE MANAGEMENT AREAS

- HABITAT MANAGEMENT PLAN ▨
- WILDERNESS MANAGEMENT PLAN 🟩
- ROAD DESIGNATION RESTRICTION 🟨
- SPECIAL ATTENTION ▨

WILDLIFE MANAGEMENT AREA

I-1	COTTONWOOD CREEK
I-2	DEEP SPRINGS VALLEY (SHADSCALE COMMUNITY)
I-4	EAST SLOPE INYO MTNS
I-5	SALINE VALLEY DUNES
I-7	LEE FLAT (SHADSCALE COMMUNITY)
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I-17	WEST PANAMINT CANYONS
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K-4	RED MTN/EL PASO MTNS (RAPTOR BREEDING AREA)
S-2	WEST MOJAVE (SALTBUSH COMMUNITY)
S-3	SUPERIOR VALLEY (JOSHUA TREE)
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S-5	ORD MOUNTAINS (JOJOBA SCRUB)
S-6	LITTLE MORONGO CANYON (PINYON-JUNIPER WOODLAND)
S-9	EAST CRONESE LAKE
S-10	AVAWATZ MOUNTAIN
S-17	GRANITE MOUNTAINS
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S-26	CHEMEHUEVI WASH
S-27	WHIPPLE MOUNTAINS
S-29	VIDAL WASH
S-32	PISGAH LAVA FLOW
R-3	BIG MORONGO CANYON
R-4	PALM OASIS
R-5	SANTA ROSA MOUNTAINS
R-7	CHUCKWALLA BENCH (DESERT TORTOISE CRUCIAL HABITAT)
R-9	CHUCKWALLA BENCH
R-12	MIDLAND IRONWOOD THICKET
R-17	COXCOMB MOUNTAINS (BIGHORN SHEEP HABITAT)
R-18	EAGLE MOUNTAINS (BIGHORN SHEEP HABITAT)
P-3	SMUGGLER'S CAVE (SOUTHERN CHAPPARAL HAB)
P-4	PINTO WASH
P-9	INDIAN WASH
P-10	MILIPITAS WASH
P-11	PALO VERDE MTNS (SONORA HABITAT)
P-13	PICACHO LAND AND WILDLIFE MANAGEMENT AREA

AREAS OF CRITICAL ENVIRONMENTAL CONCERN (ACEC)

1-	EUREKA VALLEY DUNES
2-	SALINE VALLEY / SALT LAKE / HUNTER CANYON
3-	DARWIN FALLS
4-	BLACK SPRINGS
6-	INYO BROWN TOWHEE
7-	PANAMINT VALLEY
10-	AMARGOSA CANYON
11-	KINGSTON MTNS
12-	SALT SPRINGS
13-	CLARK MOUNTAIN
22-	HARPER DRY LAKE
26-	AFTON CANYON
27-	FORT SODA
28-	INDIAN SPRINGS
29-	FORT PIUTE
30-	KELSO DUNES
35-	WHITEWATER CANYON
36-	FRINGE TOED LIZARD HABITAT
38-	RICE VALLEY DUNES
39-	CHUCKWALLA VALLEY DUNES
40-	CORN SPRINGS
41-	SALT CREEK
42-	SAN SEBASTIAN MARSH
46-	ALGODONES DUNES
50-	DESERT TORTOISE NATURAL AREA

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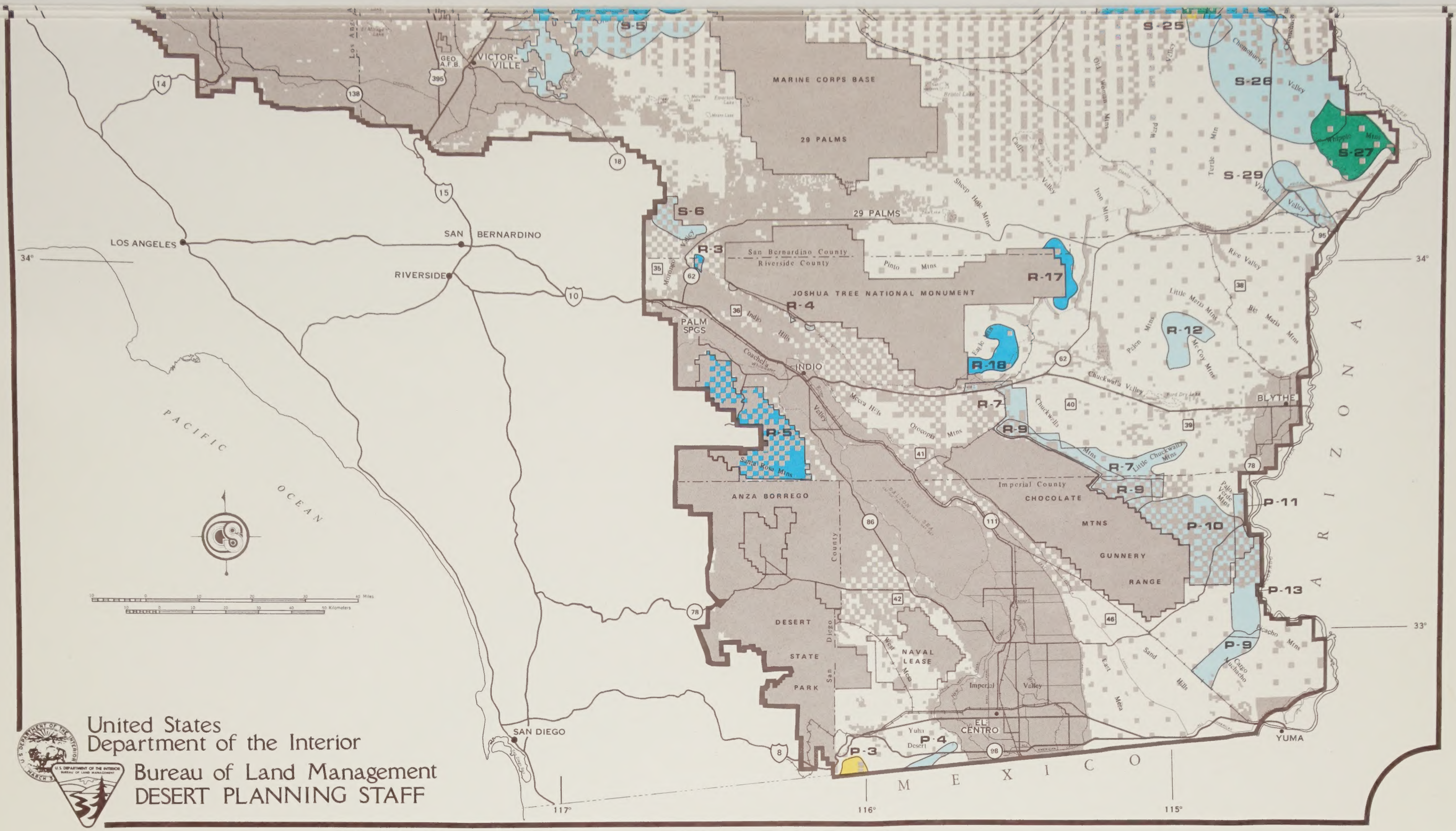
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MARINE CORPS BASE
29 PALMS
JOSHUA TREE NATIONAL MONUMENT
San Bernardino County
Riverside County
Imperial County
San Diego County
ANZA BORREGO DESERT STATE PARK
CHOCOLATE MTNS GUNNERY RANGE
NAVAL LEASE
LOS ANGELES
SAN BERNARDINO
RIVERSIDE
VICTORVILLE
GEO. A.F.B.
PALM SPGS
INDIO
BLYTHE
EL CENTRO
SAN DIEGO
YUMA
PACIFIC OCEAN
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MEXICO
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116°
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Miles
Kilometers

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C-9
Land Tenure Adjustment

BACKGROUND and ISSUES

Many of the existing land tenure problems of the desert result directly from policies and programs that existed prior to the passage of the Federal Land Policy and Management Act (FLPMA).

In its early years, the Bureau of Land Management was viewed primarily as caretaker of Federal lands that nobody else wanted. Management directives were oriented toward development and exploitation; if a legitimate use could be found for public lands, users were encouraged to take title, easement, or lease to the needed lands, usually with little or no residual Federal control. The result now observable on the land is a fragmented pattern of frequently competing uses. This is primarily a reflection of national interests and congressional intent, rather than the result of specific Bureau initiatives.

FLPMA, by contrast, provides not only defined Federal policy with respect to public lands, but also Bureau authority to carry out a broad resource management program based on multiple use and sustained yield principles. Emphasis is on stewardship, not exploitation; on recognition, protection, and development of environmental values; on extensive public participation; and on coordination of planning with other agencies.

The following programs are representative of situations to be addressed:

School Trust Land Grants. The initial Federal action which established a checkerboard pattern of land ownership was the grant of 600,000 acres of State School Trust Lands to California when statehood became effective. This grant conveyed sections 16 and 36 of each township for the purpose of public schools. In unpopulated areas of the desert these lands are not, of course, used for schools. The State of California wishes to e an adjustment of its scattered ownership into blocks of land which it can effectively use.

Congressional Grants to Railroads. A second pattern of interspersed Federal and private ownership, known as the "checkerboard," exists where alternate sections of land were granted a century ago by the Congress to the Southern Pacific Railroad as an incentive to construct a rail line through the desert.

When this land was originally acquired by Southern Pacific, the Railroad acted as a real estate dealer and sold the property rapidly to promote development of the West. Since 1947, when the Railroad's policy changed, lands have been held for their long-range income potential. Southern Pacific's goal now is to exchange lands with BLM and acquire commercial lands that are in nonsensitive areas lying in the path of land development. The Railroad's position is that BLM should manage all lands in designated wilderness areas. Southern Pacific currently owns approximately 819,000 acres in the CDCA. Exchanges are complicated by factors such as existing rights on the private land which cloud ownership title and mineral leases to third parties.

Small Tract Act of 1938. Under this Act, the Congress enabled and encouraged BLM to dispose of five-acre tracts of land to private individuals who would use and develop the land for homesites, small scale farms, and businesses. A massive demand for such tracts materialized in the early 1960s when it became apparent that California aqueduct water would flow along the edge of the Mojave Desert, and that the Palmdale Airport would be developed as a major air terminal for Los Angeles.

During the 1960s, approximately 75,000 of these tracts were sold to individuals, initially for sums as low as $15. An additional 12,000 tracts were granted as recently as the early 1970s. Few of these were actually used as intended by Congress. The vast majority were acquired by individual speculators from outside the area. Numerous management problems exist in these areas:

- The tracts are too large to form viable community clusters; they are very expensive to service with utilities, roads, and other amenities.
- Their use causes much energy-consuming individual automobile travel.
- They blight the landscape with small, scattered, and often poorly maintained structures.
- The location and boundaries of these tracts are often vague or unknown.
- Scattered Federal holdings among them are susceptible to illegal use or inclosure.

The Federal Land Policy & Management Act of 1976

Since FLPMA repealed the Small Tract Act in 1976 but provided for sale of some public lands, the prospect of the BLM resuming sales on this scale when the Desert Plan is finished has been an issue. Because of FLPMA's mandate for the Federal retention of public lands and because 300,000 to 400,000 approved, subdivided, and vacant private lots already exist in the CDCA, no large blanket sales will occur. Sales of public land may occur on a very small scale in areas around desert communities or in places where the public land tract is isolated by large areas of private holdings.

Development and Urban Use vs. Resource Management. In other instances, checkerboard ownership of land is an issue for both public land managers and private land owners. BLM resource management may conflict with development goals by the private landowner on contiguous or nearby land. Near the Pinto Valley, for example, several sections of private land surrounded by resource-sensitive public lands have been subdivided into 40-acre parcels. Development of adjacent private land has a direct effect on the quality of and access to public lands.

Similarly, a mixture of BLM and private land on the fringe of existing and growing cities and towns often exists. For a variety of reasons, public land resource management within this type of land pattern is extremely difficult. Besides the problem of development mentioned above, people living within the nearby community heavily use the public lands for motorized vehicle play, shooting, horseback riding, and other recreational activities, thereby altering the native plant and animal communities and disturbing the soil surface. Such a situation has occurred near Ridgecrest. In addition, the Coachella Valley Fringe-toed Lizard (proposed for Federal listing as Threatened), located on vacant public and private land near the urbanized areas of the Coachella Valley, is continuously threatened by encroaching urban development.

BLM lands which are used for competitive events or designated as vehicle play areas become a nuisance to private land owners and thereby deprive them of the enjoyment and use of their property. Some populated areas like the Morongo Valley have been subjected to windblown dust due to upwind competitive vehicle events or recreation vehicle play on public lands.

CDCA Boundary. A final potential issue is the boundary of the CDCA itself. Portions of the Conservation Area abut lands managed by the U.S. Forest Service. Should a realignment of this boundary be warranted due to a conflict of management objectives or problems of access, an act of Congress would be necessary for the change, similar to the McCain Valley adjustment procedure described in the Implementation Section of this plan (Part III).

APPROACH

In view of the foregoing background and issues the following objectives are established for undertaking the Land Tenure Adjustment Program in the California desert.

➊ To provide a program that complements the objectives of other Desert Plan elements by providing a land tenure pattern necessary for management.

➋ To establish a program for land conveyance that will provide for stable and beneficial patterns of public and private land use.

➌ To acquire lands which could be more beneficially maintained under BLM control.

➍ To cooperate with other public agencies at various levels of government in the management of adjacent and interspersed public and private lands.

It is important to note that the objectives and approach of the Land Tenure Adjustment Program will remain the same for all Desert Plan alternatives and will be initiated regardless of which alternative is adopted. The only variable is the number of acres conveyed to support the varying objectives of each plan alternative.

Land tenure adjustment revisions are organized into three categories:

Resource Protection Areas. Of the four land use classes established by the Desert Plan, Wilderness and the Limited Use Class (C and L) both bring a high degree of protection-oriented values into focus. Management in these classes is enhanced if the Bureau is able to acquire the private or State-owned parcels within these classes. The acquisition of nonpublic parcels also enhances the protection-oriented management of Areas of Critical Environmental Concern. Lands in the resource protection category will be actively acquired by BLM in the following priority: 1) ACEC; 2) Wilderness (Class C); and 3) Limited Use (Class L).

Resource Use Areas. The Intensive Use Class (I) in some areas is designated to accommodate off-road vehicle free play and unlimited access. The negative impact to adjacent private property of this management action is described in the background portion of the element. Lands in this category will be actively acquired by BLM for the purpose of enhancing the use of public lands for these recreational activities and reducing impact to private parcels. Priority for acquisition is:

➊ Vehicle open areas close to large urban populations;

➋ Areas which either receive high visitor use concentrations for extended periods of time or are frequently visited during the year;

➌ Pit areas along cross-country race courses.

Lands meeting these criteria will be acquired by the year 2000.

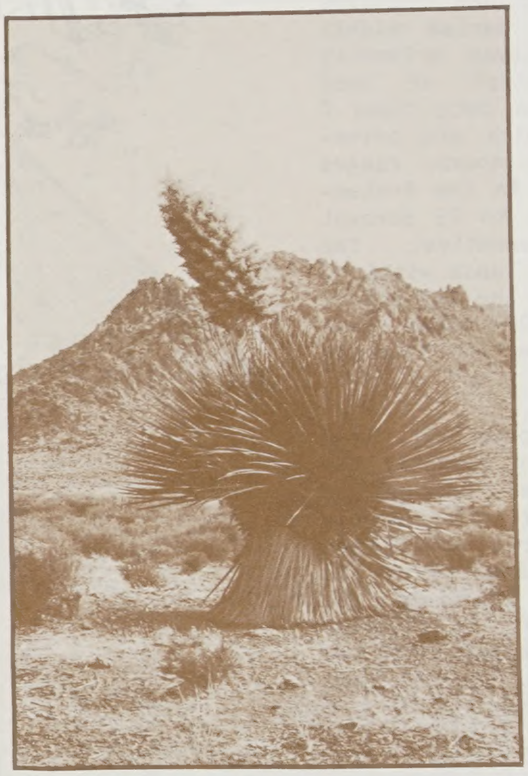
Land Tenure Management Areas. This category of land tenure activity includes all BLM tracts in the CDCA which are not covered by the multiple use classes. These public lands are found in and around the desert communities of Desert Center, Baker, Cima, Kelso, Trona, Tecopa, Red Mountain, Shoshone, Pahrump Valley, Mesquite Valley, Lanfair Valley, Twentynine Palms, Morongo Valley, Lucerne Valley, Johnson Valley, Yucca Valley, Ocotillo, Plaster City, Antelope Valley, Imperial Valley and Coachella Valley. Other parcels are located in or around the 23 incorporated cities in the CDCA. These scattered public lands present both a problem and an opportunity to the Bureau. They are a problem because of their isolation and lack of management attention. In many instances the Bureau does not have sufficient data to designate a multiple use class for them. Since these parcels are sometimes difficult to locate in the field, the public would find it difficult to conform to the land use guidelines for them.

These parcels are an opportunity for the Bureau because they could be exchanged for private property elsewhere. For example, the Southern Pacific Railroad is seeking high value land in the path of development. These parcels can also be conveyed to solve land use conflicts that arise between adjacent public and private ownership. Since these lands are located where local and Federal planning interface, an opportunity exists to resolve some of the issues related to intergovernmental coordination and the establishment of consistency between the plans and programs of local governments and the Bureau. By establishing a coherent, coordinated land tenure management program, both local and Federal governments can plan more effectively. Disposition of these parcels to the State of California benefits its interests by providing potential for acquiring higher value lands, consistent with the State's current acquisition policies.

The Land Tenure Management Area concept will be translated into a program for disposals, exchanges, acquisitions, and leases within spheres of conflict surrounding desert communities. The type of conveyance will be determined by a detailed activity plan which will proceed according to these steps: 1) define individual program area, 2) determine land use suitability, 3) establish tenure option (trade, purchase, tax delinquencies, disposal), 4) develop project plan and coordination program with local government, and 5) implement.

The lease program will be limited to agricultural uses and resolution of trespass cases. Those lands retained or acquired in the Land Tenure Management Area will be classified as L, M, or I, depending on the resource values present. Resolution of the tenure in this area is anticipated by the year 2000.

As mentioned earlier, the objectives for all three action alternatives are constant, varying only in the number of acres conveyed to meet the objectives in each plan alternative. No separate alternative discussion is included in this element, but the varying areas of potential disposal and acquisition for each action alternative, are shown on the Protection, Balanced, and Use Land Tenure Adjustment Element Maps Table L-2 displays existing land ownership and administration in the CDCA.



IMPLEMENTATION ASSUMPTIONS

There will be major land exchange programs with both the Southern Pacific Railroad and the State of California. Generally, only lands totally within the CDCA will be involved. However, given the size and extent of this program, land within other California BLM districts may be included in these exchanges. By offering the higher value lands within the Land Tenure Management Areas, it is assumed that many more acres of "remote" desert holdings can be acquired in the ACECs, Wilderness, Class I vehicle open areas, and Class L areas. Completion is expected by the year 2000.

The BLM will work with desert communities, cities, and counties to adjust land tenure for effective and logical management actions consistent with local and Federal requirements. Essential completion is expected by the year 2000.

U.S. Forest Service and BLM boundary adjustments for the CDCA will be made as they are identified by either agency.

Exchanges with the hundreds of small parcel (100 acres or less) landowners will be conducted as needed or available.

The transfer of public land to private ownership will require an environmental assessment in the form of an EAR or, in the case of major exchange packages, an EIS. It is recognized that scattered and interspersed public land may contain highly significant resource values which should remain in public ownership. These values will be considered in the environmental assessment.

SUMMARY OF ELEMENT COMPONENTS

Table L-1 summarizes these potential acquisition and disposals for each Desert Plan alternative. Table L-2 shows the present land ownership and administration of CDCA lands.

The amount of land proposed for acquisition varies widely between alternatives primarily because the extent of land designated within both Class C and Class L, which are potential acquisition areas, ranges from 94 percent in the Protection Alternative to 23 percent in the Use Alternative. The total of private lands within C and L classes in the Use Alternative is 20,000 acres less than in the Protection Alternative.

The disposal potential, however, varies only slightly between alternatives, because the offered lands will come largely from the scattered and interspersed public lands which lie outside of the multiple use class designation. In general, those lands excluded from the management classes are the same in each alternative.

Table L-1

COMPARISON OF POTENTIAL ACQUISITIONS AND DISPOSALS BY PLAN ALTERNATIVE – IN ACRES

Classification	No Action Alternative (000)	Protection Alternative (000)	Balanced Alternative (000)	Use Alternative (000)
		Acquitions		
ACEC		68	68	68
Class C (Wilderness)		764	272	26
Class L		1,529	869	403
Class I (Vehicle Open Area)		17	54	316
Totals		2,378	1,263	813
		Disposals		
		274	296	274

Table L-2

LAND OWNERSHIP AND ADMINISTRATION IN THE CDCA

Type of Administration or Owner	Acres (000)	Percent
BLM	12,131	47.2
State	391	1.5
Private:	(6,085)	(23.7)
Southern Pacific Railroad	819	3.2
Other	5,266	20.5
National Monuments:	(2,497)	(9.7)
Death Valley	1,933	7.5
Joshua Tree	564	2.2
Military:	(3,172)	(12.4)
Naval Weapons Center China Lake	610	2.4
Mojave "B" and Randsburg Wash	559	2.2
Chocolate Mountains	457	1.8
29 Palms Marine Base	568	2.2
Fort Irwin and Goldstone	635	2.5
Edwards Air Force Base	301	1.1
George Air Force Base	5	
Marine Corps Logistics Depot – Nebo and Yermo	6	
Carrizo Impact Area	31	.1
City of Los Angeles Dept. of Water and Power	152	.6
Anza-Borrego Desert State Park[a]	494	1.9
Other: Bureau of Reclamation, Recreation, Bureau of Indian Affairs and other small withdrawals	751	2.9
Total	25,673	100.0

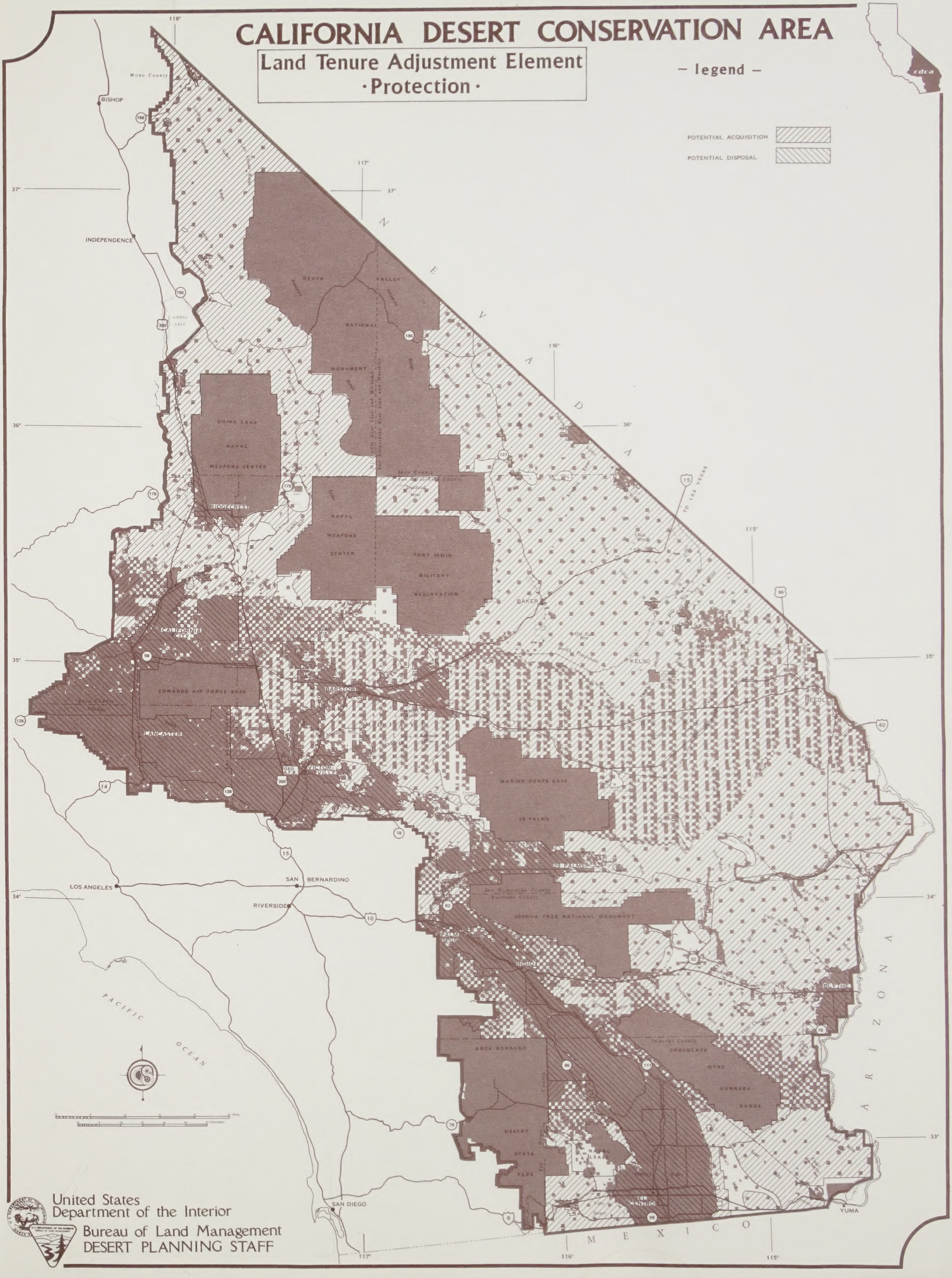
[a] State-administered lands, including Anza-Borrego Desert State Park (withdrawn by an Act of Congress), total 885,000 acres or 3.4% of the California Desert Conservation Area.

While Table L-1 shows a much greater acreage identified for acquisition than disposal under all alternatives, the value of the 2 land categories is anticipated to be much closer. Potential disposal lands lying closer to developing communities are generally of considerably higher value than the more remote lands proposed for acquisition. Local and county tax effects will, however, be analyzed in environmental assessment or EISs on subsequent specific exchanges.

Reasonable alternatives to land acquisition such as cooperative agreements with adjoining land owners will also be considered where practical for serving management requirements.

CALIFORNIA DESERT CONSERVATION AREA

Land Tenure Adjustment Element
·Protection·



– legend –
POTENTIAL ACQUISITION ▨
POTENTIAL DISPOSAL ▨
cdca
BISHOP
Mono County
INDEPENDENCE
DEATH VALLEY NATIONAL MONUMENT
CHINA LAKE NAVAL WEAPONS CENTER
RIDGECREST
NAVAL WEAPONS CENTER
FORT IRWIN MILITARY RESERVATION
Inyo County
San Bernardino County
BAKER
KELSO
TO LAS VEGAS
NEEDLES
CALIFORNIA CITY
EDWARDS AIR FORCE BASE
LANCASTER
BARSTOW
GEO A.F.B.
VICTORVILLE
MARINE CORPS BASE 29 PALMS
29 PALMS
JOSHUA TREE NATIONAL MONUMENT
San Bernardino County
Riverside County
PALM SPGS
INDIO
BLYTHE
ANZA BORREGO DESERT STATE PARK
Imperial County
CHOCOLATE MTNS GUNNERY RANGE
EL CENTRO
YUMA
LOS ANGELES
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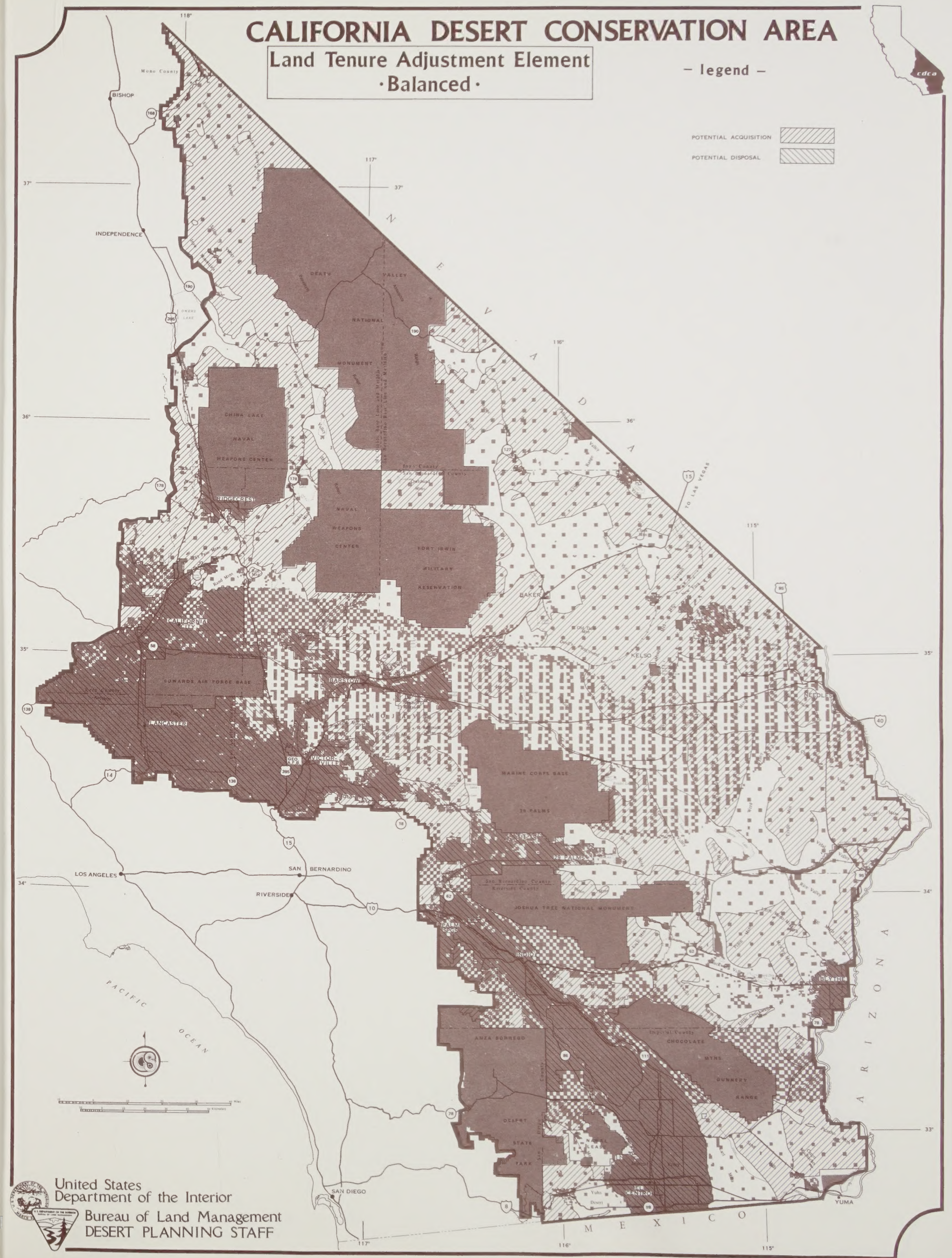
CALIFORNIA DESERT CONSERVATION AREA

Land Tenure Adjustment Element
·Balanced·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DEATH VALLEY NATIONAL MONUMENT
CHINA LAKE NAVAL WEAPONS CENTER
RIDGECREST
NAVAL WEAPONS CENTER
FORT IRWIN MILITARY RESERVATION
Inyo County
San Bernardino County
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VICTORVILLE
MARINE CORPS BASE 29 PALMS
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SAN BERNARDINO
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PALM SPGS
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Imperial County
CHOCOLATE MTNS GUNNERY RANGE
EL CENTRO
SAN DIEGO
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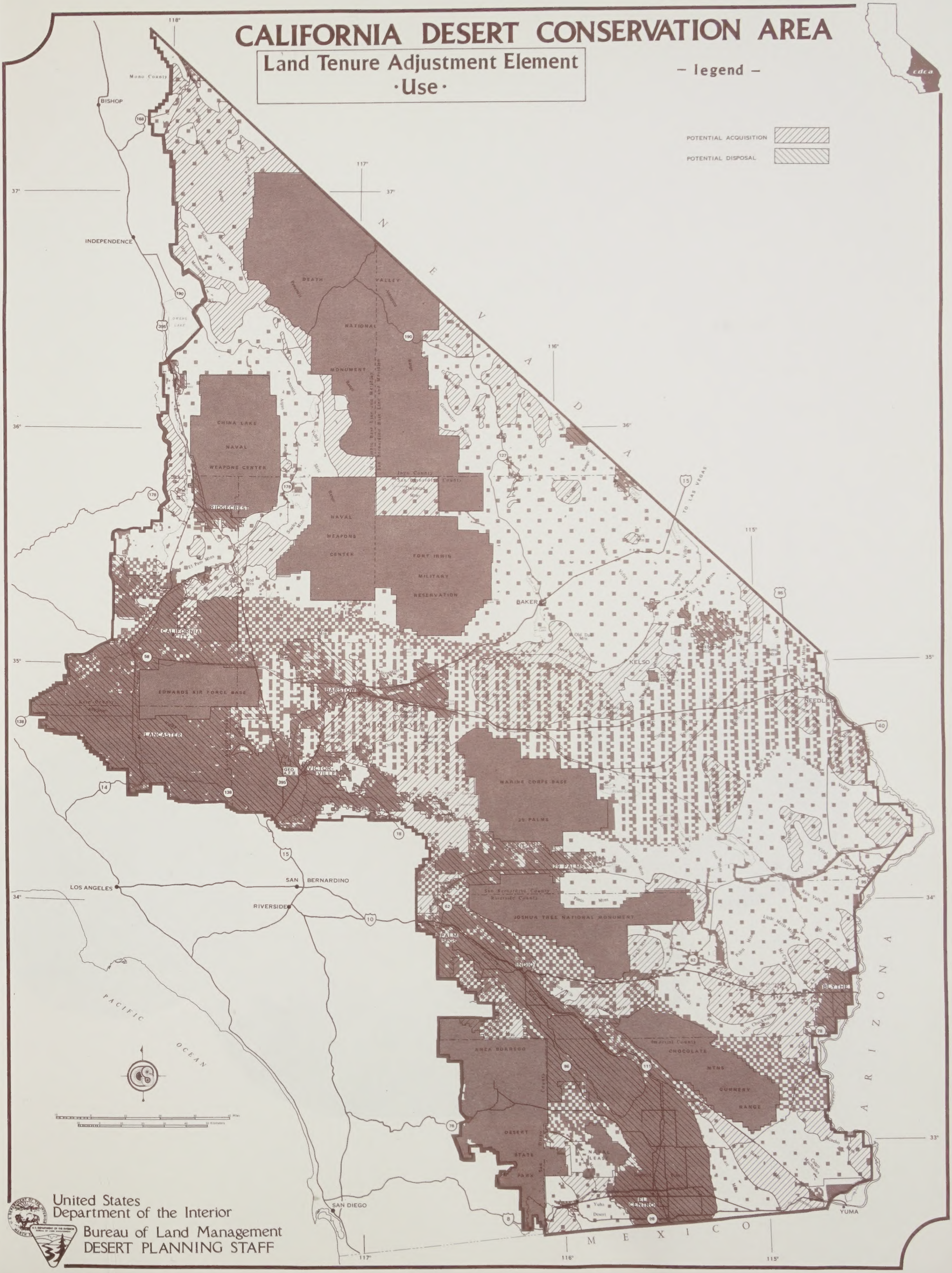
CALIFORNIA DESERT CONSERVATION AREA

Land Tenure Adjustment Element
·Use·



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POTENTIAL ACQUISITION ▨
POTENTIAL DISPOSAL ▨
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Los Angeles
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part II-d

Areas of Critical Environmental Concern

Areas of Critical Environmental Concern (A.C.E.C.)

BACKGROUND and ISSUES

Areas of Critical Environmental Concern (ACECs) are defined as those areas within the public lands where special management attention is required (when such areas are developed or used, or where no development is required) to protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources, or other natural systems or processes, or to protect human life and provide safety from natural hazards (FLPMA Section 103 (a)).

In keeping with this definition and the intent of FLPMA, the following objectives have been established:

❶ To preserve, protect, and maintain cultural and Native American resources. Cultural resource ACECs include a wide variety of important, unique, and irreplaceable prehistoric or historic locations, and features of extreme significance and in immediate danger of destruction or loss. Native American cultural or religious values in immediate danger of desecration or destruction are also proposed for ACEC designation.

❷ To protect, maintain, and enhance critical wildlife habitat. This includes isolated dune systems, marshes or riparian habitats, and localities where species of Rare, Endangered, or sensitive animals face serious threats from the many activities of man.

❸ To protect rare or unusual plant assemblages and to provide for future research and scientific use.

❹ To protect and manage outstanding natural features and scenic values for recreational purposes.

❺ To protect geologic and paleontologic resources from deterioration while allowing their continued use for educational and scientific research purposes.

❻ Compatible uses will be allowed to the extent they do not conflict with the 5 objectives stated above.

No ACEC needs were identified for the protection of human life and provisions of safety from natural hazards.

ACEC designations are recommended where site-specific resources require special management considerations which differ from or are insufficiently addressed in the more general management prescriptions of the multile use class guidelines and resource elements. ACEC management prescriptions take precedence over the general guidelines for multiple use class area designations within which they are located.

APPROACH

Unlike the plan elements, recommended ACECs do not vary by alternative. All action alternatives propose establishment of 50 ACECs with identical objectives, locations, and areas of coverage. The No Action Alternative, by definition, provides for no establishment of ACECs. The rationale for this approach is that Areas of Critical Environmental Concern are a public land planning priority as mandated by FLPMA. Areas of Critical Environmental Concern occur in the CDCA where they are found, regardless of management alternative. The specific ACEC management prescriptions will depend on the degree of protection provided by the multiple use class adjacent to the ACEC in the final plan. Recommended ACECs and summaries of general management prescriptions are listed in Table AC-1.

The designation of all approved ACECs will become effective upon the adoption of this plan and specific management prescriptions completed the following year. The first phase of ACEC implementation, including the designation of roads and construction of protective fences where necessary, will be completed within two years following adoption of the plan.

In the period between publication of the draft plan alternatives and implementation of specific ACEC management prescriptions following final desert plan adoption, interim policy will be given to identify ACEC values. Uses conflicting with identified ACEC management requirements will be prohibited during this period regardless of proposed surrounding multiple use management classes.

MONITORING

Within their specific management prescriptions, ACECs will contain designs for monitoring of trends in the critical environmental values receiving protection and for assessing the effectiveness of protective measures being applied.

IDENTIFICATION CRITERIA

A number of criteria were employed in evaluating the suitability of critical resources for ACEC nominations. The appropriateness of each potential ACEC designation was evaluated on a site-specific basis in relation to its relevance, importance, criticality, and protectability. These are explained briefly below.

- Relevance A resource was considered relevant if it is included in the definition of an ACEC in the Federal Land Policy and Management Act. Specifically, those resources include: historic, cultural, and scenic values; naturally occurring fish and wildlife resources; other natural systems or processes; and natural hazards.

- Importance A resource is considered important if: (a) it possesses more than local significance, or (b) it is of special worth, rarity, consequence, or is a cause for concern when compared to like entities. A natural hazard could be deemed "important" if it poses a significant threat to human life or property.

Determinations of importance of potential ACECs are based on all available data assessed during the inventory phase of the Desert Plan.

These data include the judgments of specialists qualified by knowledge, training, or experience to assess these qualities. Additionally, supporting evidence of importance may be based on the judgment or perception of a substantial number of persons beyond the immediate location of the critical area. Additionally, a local community may perceive that a critical area or resource is important. For example, a group of Native Americans may consider a resource especially valuable because of its ceremonial or mythological significance, or a resource may be important because of its significance to local history or folklore.

- **Criticality** The critical nature of a resource was primarily determined by: (a) evaluation of the susceptibility to potential damage or decisive adverse change to those qualities which make a resource important; or (b) the need for special management to insure that such potential change will not occur.

- **Protectability** "Protectability" is ultimately the determination of the possibility and capability of preventing a decisive adverse change in a resource.

A resource must be in a viable or potentially viable condition, with a good possibility of survival or persistence within the area being considered. The area must also be capable of sustaining the resource's value under the kind and degree of protective management that BLM is capable of providing, and that can be provided feasibly.

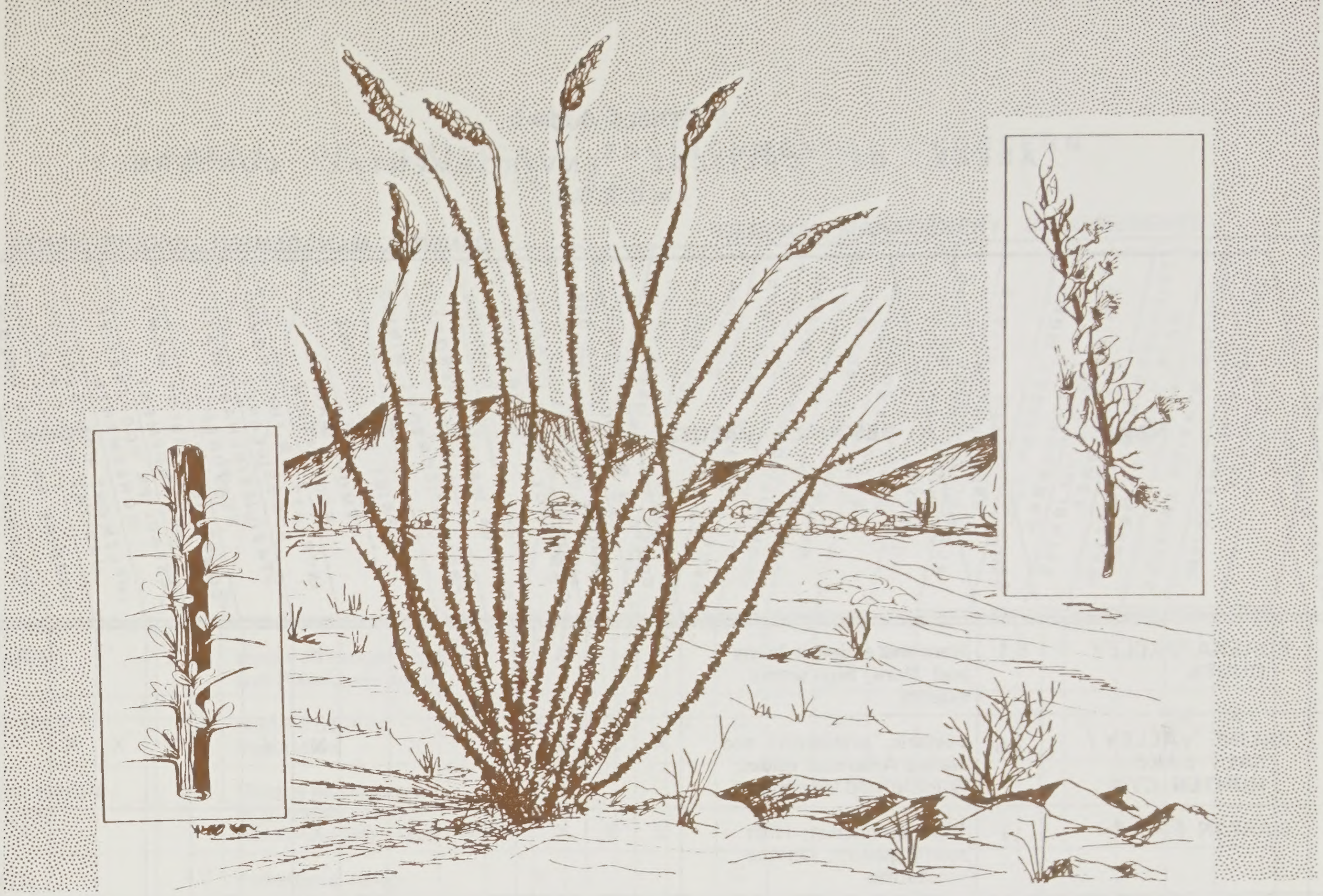
Protectability can be a function of the resource's location, size or boundary configuration, physiography, manageability, and uses nearby or otherwise affecting the area, as well as the requirements for survival of the resource itself.

IDENTIFICATION CONSIDERATIONS

Recommendations for ACECs, including maps, narratives and supporting documentation, were submitted by resource specialists for review by management. The review team included Desert Plan Staff planners, representatives from the BLM California State Office, the Riverside and Bakersfield District Managers, and the State Director.

Factors evaluated by the review team included intensity of threatening uses, proposed protective action and its probable effects, and risk to the resources resulting from its designation as an ACEC.

Many geographic localities or sites were recommended for protection for more than one resource value. These individual recommendations have in many instances been consolidated into ACEC. See Table A-2 for an indication of ACECs related to each element values. Of the 202 sites recommended by resource specialists, 115 were rejected by management based on the evaluation criteria of criticality and protectability. The remaining 87 sites were consolidated into 50 proposed ACECs (encompassing approximately 320,000 acres) which are listed in Table AC-1 and shown on the three action alternative maps (See alternative maps in front pocket). A list of those candidate ACECs which were rejected by management is included in Appendix 4. Those ACECs recommended for designation represent a level of management commitment which appears to be practical in the immediate future.



MANAGEMENT REQUIREMENTS

A summary of management requirements for each proposed ACEC is shown in columns on the righthand side of Table AC-1. These management requirements identify generally what actions are needed to protect the site. Some of these may be met by adjacent multiple use class guidelines depending on the alternatives. In the final plan a more detailed set of requirements will be provided. Following is a short description of the fourteen catagories listed in the table.

Control Vehicular Use - This will be accomplished either by closing the area to motorized vehicle use or by designating appropriate roads and ways within the ACEC.

Remove Burros/Grazing - In most instances this will be achieved by fencing the most critical areas (e.g., natural springs).

Control Visitor Use and Camping - This will be accomplished through proper location and design of campgrounds and the prohibition of overnight camping where appropriate.

Reduce Water Overdraft - In cases where riparian areas are or could be affected by removal of underground water, management would monitor the site and, where possible, take steps to control overdraft.

Prohibit/Control Mining - The proposed level of control is shown in the table. "W" indicates a withdrawal from all forms of mineral entry (no mining permitted) and "C" means control of mineral exploration and development by means of a plan for surface protection.

Restrict Collecting - This includes rocks, gems, fossils, plant material, and wildlife.

Remove Exotic Vegetation - In instances where natural habitats are being replaced by introduced plant species, a program for eradication of these species would be undertaken.

Increase On-the-ground Surveillance - The surveillance of critical areas for protection against vandalism and misuse can take several forms, including desert ranger patrols and other forms of BLM presence in the field, volunteer patrols and "stakeouts" by organized groups, and volunteer resident caretakers.

Stabilize/Rehabilitate Features - This applies to cultural sites where special steps must be taken to arrest deterioration of significant features (e.g., historic ruins) from natural forces such as wind, water, and extreme temperatures.

Continue Present Management Arrangement - Where current management plans and practices are effective, they will be continued and merged with the ACEC management plan.

Establish Cooperative Agreement - Sometimes overlapping agency jurisdiction will require a cooperative management agreement (e.g., agreement between BLM and California Department of Fish and Game to protect a rare wildlife species). There are also cases where a cooperative agreement with private property owners is needed to properly manage the ACEC.

Implement Comprehensive Habitat Management Plan - Detailed plans for the protection and enhancement of wildlife habitat may take the form of a "Wildlife Habitat Management Plan" which would follow normal Bureau procedures (see Wildlife Element).

Acquire Private Holdings - Private land within the ACEC may be proposed for acquisition either by purchase or exchange.

Implement Interpretive Program - Visitor interpretation of the site could include one or more of the following: interpretive signs or kiosks, visitor contact stations.

TABLE A/C - 1

AREAS OF CRITICAL ENVIRONMENTAL CONCERN
(A. C. E. C.)

AREA NUMBER	NAME	ACRES (000)	RESOURCE VALUES	GENERAL MANAGEMENT REQUIREMENTS														
				CONTROL VEHICULAR USE	REMOVE BURROS/GRAZING	CONTROL VISITOR USE/ CAMPING	REDUCE WATER OVERDRAFT	PROHIBIT/CONTROL MINING	RESTRICT COLLECTING	REMOVE EXOTIC VEGETATION	INCREASE ON-THE-GROUND SURVEILLANCE	STABILIZE/REHABILITATE FEATURES	CONTINUE PRESENT MGMT ARRANGEMENT	ESTABLISH COOPERATIVE AGREEMENTS	IMPLEMENT COMPREHENSIVE HABITAT MGMT PLAN	ACQUIRE PRIVATE HOLDINGS	IMPLEMENT INTERPRETIVE PROGRAM	OTHER
1	EUREKA VALLEY DUNES	5.1	Rare and endemic fauna and flora, high scenic quality	X		X		W			X						X	X
2	SALINE VALLEY / SALT LAKE / HUNTER CYN	2.6	Historic, prehistoric and Native American values; Wildlife and vegetation	X	X	X	X		X		X	X		X	X	X		
3	DARWIN FALLS	.7	Riparian habitat; High scenic quality; Unique vegetation	X	X	X		W		X	X						X	
4	BLACK SPRINGS	.5	Riparian habitat		X	X	X				X						X	
5	FOSSIL FALLS	.6	Unique geological site; Prehistoric values	X		X			X		X					X	X	
6	INYO BROWN TOWHEE	10.3	Wildlife habitat; Great Falls Basin scenic area	X	X	X	X	C			X			X		X		
7	PANAMINT VALLEY	7.0	Wildlife habitat; Historic and Prehistoric values	X	X	X		C			X	X				X	X	X
8	PANAMINT CITY	1.0	Historic and Prehistoric values; High scenic quality; Vegetation	X		X					X					X	X	
9	GREEN WATER CYN	3.4	Native American and Prehistoric values	X		X					X							
10	AMARGOSA CYN	5.8	Wildlife habitat; High scenic quality; Vegetation	X		X		W			X					X		
11	KINGSTON MTNS	21.6	Wildlife; Unique vegetation; High scenic quality	X		X			W[1]						X			X
12	SALT SPRINGS	1.4	Prehistoric and historic values	X		X				X	X						X	
13	CLARK MTN	18.2	Wildlife; Unique vegetation; Cultural values; High scenic quality	X	X	X		W[1]			X					X		
14	MOUNTAIN PASS	2.2	Historic mining camp	X		X		C			X	X		X			X	
15	TRONA PINNACLES	2.2	Unique geologic formation; High scenic quality	X		X					X						X	
16	BEDROCK SPRINGS	.3	Prehistoric values	X		X					X							X
17	STEAM WELLS	.06	Prehistoric values	X		X					X							X
18	SQUAW SPRINGS	.6	Prehistoric values	X		X					X							
19	BLACK WATER WELL	2.2	Prehistoric and historic values	X		X					X			X				X
20	GOLDSTONE	1.9	Historic mining	X							X			X			X	X

W [1] = Withdraw only the limited area containing the unique white fir forest.

Table A/C - 1 (cont.)

AREAS OF CRITICAL ENVIRONMENTAL CONCERN
(A. C. E. C.)

AREA NUMBER	NAME	ACRES (000)	RESOURCE VALUES	GENERAL MANAGEMENT REQUIREMENTS														
				CONTROL VEHICULAR USE	REMOVE BURROS/GRAZING	CONTROL VISITOR USE/ CAMPING	REDUCE WATER OVERDRAFT	PROHIBIT/CONTROL MINING	RESTRICT COLLECTING	REMOVE EXOTIC VEGETATION	INCREASE ON-THE-GROUND SURVEILLANCE	STABILIZE/REHABILITATE FEATURES	CONTINUE PRESENT MGMT ARRANGEMENT	ESTABLISH COOPERATIVE AGREEMENTS	IMPLEMENT COMPREHENSIVE HABITAT MGMT PLAN	ACQUIRE PRIVATE HOLDINGS	IMPLEMENT INTERPRETIVE PROGRAM	OTHER
21	BLACK MTN	23.8	Native American/Historic and Prehistoric values	X							X					X	X	
22	HARPER DRY LAKE	1.4	Wildlife habitat; Vegetation	X	X		X	C		X				X	X		X	X
23	RAINBOW BASIN / OWL CYN	2.0	Unique geologic area; High scenic values; Paleontological values	X				W	X		X						X	X
24	IRON MTN	4.0	Prehistoric values	X	X			C			X							
25	CALICO MAN SITE	1.2	Prehistoric excavation site					W			X		X				X	
26	AFTON CYN	18.4	High scenic quality; Riparian habitat; Historic trail; Significant vegetative assemblage	X	X	X		W		X	X					X	X	X
27	FORT SODA	4.7	Riparian habitat; Historic and Prehistoric values	X								X	X				X	X
28	INDIAN SPRINGS	3.8	Riparian habitat		X													X
29	FORT PIUTE	1.5	High scenic quality; Historic/Prehistoric values; Riparian habitat	X	X	X		W	X	X	X				X	X	X	
30	KELSO DUNES	46.4	High scenic quality; Wildlife; Vegetation	X	X		X	W		X							X	
31	BARREL SPRINGS	1.5	Prehistoric values	X		X		W			X					X		
32	AMBOY CRATER	4.5	Unique geologic formation	X												X	X	
33	ANCIENT CREOSOTE RINGS	5.1	Unique vegetation	X				C			X					X	X	
34	JUNIPER FLATS	3.5	Prehistoric values	X	X			C	X		X						X	
35	WHITEWATER CYN	14.4	Native American values; Wildlife; Vegetation	X		X					X			X			X	
36	FRINGE TOED LIZARD HABITAT	11.8	Wildlife habitat	X							X			X				X
37	IRON MTN (Army Camp)	3.6	Historic site - Military Camp - WW II	X		X					X	X					X	
38	RICE VALLEY DUNES	9.2	Wildlife habitat	X							X							
39	CHUCKWALLA VALLEY DUNES	2.7	Wildlife habitat	X		X		C								X		
40	CORN SPRINGS	3.8	High scenic quality; Wildlife; Prehistoric values; Vegetation	X		X				X	X						X	

Table A/C - 1 (cont.)

AREAS OF CRITICAL ENVIRONMENTAL CONCERN (A.C.E.C.)

AREA NUMBER	NAME	ACRES (000)	RESOURCE VALUES	CONTROL VEHICULAR USE	REMOVE BURROS/GRAZING	CONTROL VISITOR USE/ CAMPING	REDUCE WATER OVERDRAFT	PROHIBIT/CONTROL MINING	RESTRICT COLLECTING	REMOVE EXOTIC VEGETATION	INCREASE ON-THE-GROUND SURVEILLANCE	STABILIZE/REHABILITATE FEATURES	CONTINUE PRESENT MGMT ARRANGEMENT	ESTABLISH COOPERATIVE AGREEMENTS	IMPLEMENT COMPREHENSIVE HABITAT MGMT PLAN	ACQUIRE PRIVATE HOLDINGS	IMPLEMENT INTERPRETIVE PROGRAM	OTHER
				GENERAL MANAGEMENT REQUIREMENTS														
41	SALT CREEK	16.0	Wildlife habitat; Native American values	X	X					X				X		X		
42	SAN SEBASTIAN MARSH	9.2	Wildlife habitat; Historic and Prehistoric/Native American values	X		X	X	W		X	X	X		X		X	X	X
43	COYOTE MTNS	3.8	Prehistoric values; Unique scenic area; Paleontologic values	X					X		X						X	
44	PLASTER CITY	14.9	Prehistoric values	X		X		W	X		X							
45	YUHA INTAGLIOS	5.2	Prehistoric values; Vegetation	X		X		W			X	X					X	
46	ALGODONES DUNES	37.1	High scenic quality; Wildlife; Unique vegetation	X				W			X						X	
47	TUMCO	7.7	Historic/Native American values	X		X		C			X	X					X	
48	PILOT KNOB	2.6	Prehistoric/Native American values			X		W			X	X		X		X	X	
49	LAKE CAHUILLA	4.7	Prehistoric values	X				W			X							
50	DESERT TORTOISE NATURAL AREA	25.8	Wildlife	X		X		W							X	X		

PART III

implementation

part III-a

C.D.A.C. Recommendations

a-1

•california desert advisory committee• recommendations

The California Desert Plan represents a long-term commitment by the Bureau to comprehensive management of the desert and its resources. Immediate increases in funding and manpower are not anticipated. However, substantial budgetary increases will be required over the next 20 years to implement programs and planning decisions set forth in the plan. Although the plan document cannot be considered a specific budget commitment, it does, if adopted, represent a real commitment to do everything possible to carry out the stated goals, objectives, and policies set forth in the plan.

To assist the Bureau in designing long-range implementation goals, the California Desert Advisory Committee established a special task force to study and submit recommendations. The Committee recommends the following implementation goals:

❶ Establish an organizational structure that treats the CDCA as a single management unit. (This recommendation will be implemented in fiscal year 1981, upon adoption of the plan in September, 1980. At that time a single district will be established to manage the CDCA, which is now served by the Riverside and Bakersfield districts.)

❷ Institute personnel practices that: (a) insure the hiring of qualified staff who are committed to the goals of the Desert Plan; (b) provide career incentives to retain CDCA-trained staff for more than the short term; and (c) specify orientation and training of staff periodically as changes occur.

(To further the objectives of this program, the Bureau must hire qualified individuals who have an interest in and desire to contribute professionally to the management of the desert. In order to maintain this "core" of committed staff members, the Bureau must further provide career advancement opportunities within the CDCA).

❸ Authorize the use of volunteers to aid in establishing BLM "presence" within areas needing protection. (The success of volunteer assistance in other agencies should serve as a model for the Bureau. There are numerous organizations and individuals who would support and participate in an auxiliary patrol or special surveillance program to prevent overuse, unauthorized collecting, and vandalism on the public land. In some cases the use of a volunteer resident caretaker may provide a means to help protect resources.)

❹ Institute long-range programs to educate desert users, in order to minimize the use of enforcement procedures. (Investments in environmental education will result in a more enlightened, self-policing desert recreationist; this program should include education packages for schools, special interpretive facilities, desert classrooms, and field trips for organized groups.)

❺ Establish explicit long-range provisions to continue the following: (a) monitor cumulative results of impacts on sensitive resources; (b) evaluate the plan's manageability; and (c) assess changes that affect the plan's relevance and fitness. (The planning process continues after the plan is adopted. This process must provide the flexibility needed to accommodate change.)

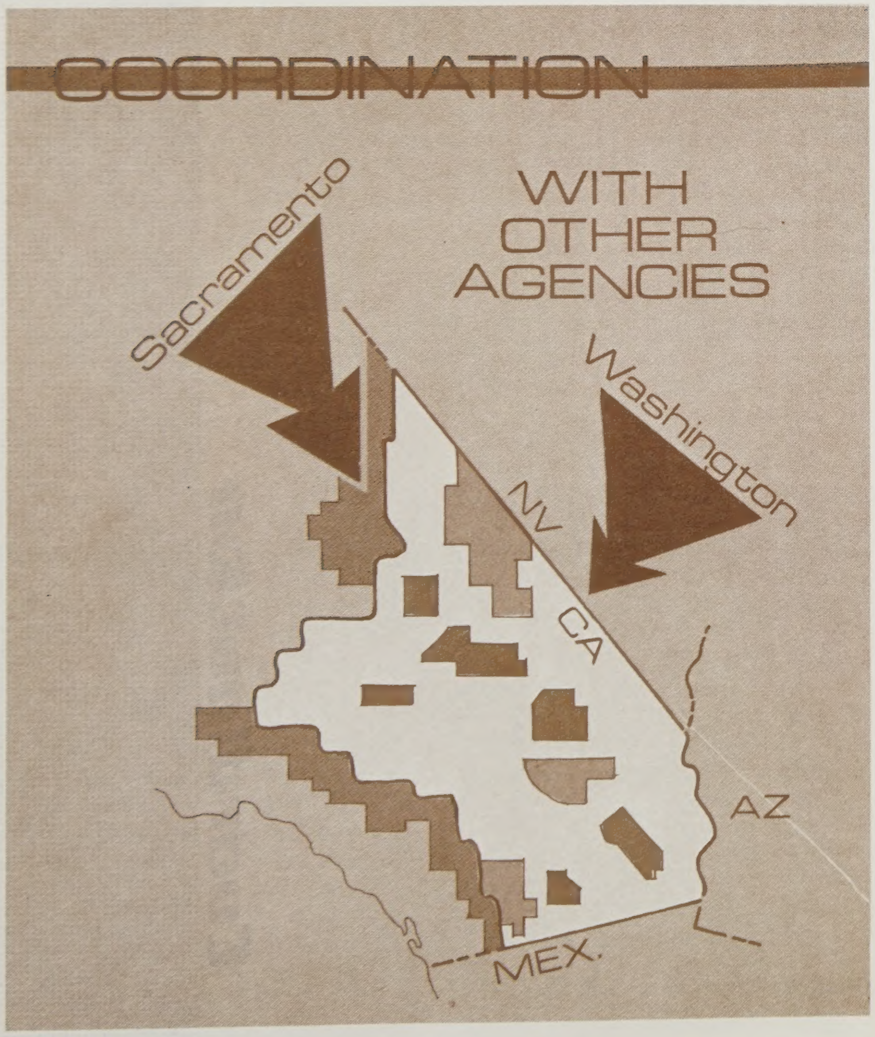
❻ Establish methods for regularly amending the plan within the mandates of the law (FLPMA, Section 601) rather than "put-out-the-fire" crisis amendments. (The proposed procedure is outlined in the Plan Amendment Process section on page 174.

❼ Appoint a high-level citizens' oversight committee (not the present Desert Advisory Committee) to monitor the use of the desert. (BLM Districts are authorized by Section 309 (a) FLPMA to establish advisory councils made up of representatives of the various citizens' major interest in the desert.)

In addition to the above listed general implementation recommendations, each plan element contains more specific implementation measures for that particular element.

part III-b

Coordination


COORDINATION
WITH OTHER AGENCIES
Sacramento
Washington
NV
CA
AZ
MEX.

• Coordination • with other Government Agencies

Section 202(c)(9) of FLPMA states that, "to the extent consistent with the laws governing the administration of the public lands, coordinate the land use inventory, planning, and management activities of or for such lands with the land use planning and management programs of other Federal departments and agencies and of the State and local government within which the lands are located..."

During the inventory phase of this program over 70 governmental agencies were contacted to elicit suggestions and to obtain plans and programs relevant to the California desert. This included State agencies, other Federal agencies and local cities and counties. In addition, contacts have been established with a number of Native American tribes who have cultural interests in the desert (see Cultural Resource Element). This coordination is explained briefly below.

b-1

COORDINATION WITH COUNTY and CITY GOVERNMENT

The plans and programs of desert communities and counties within the CDCA were analyzed with respect to consistency with the desert program. This analysis included the major planning components of local general plans -- land use, transportation, public facilities, open space, and conservation. The goals, objectives, and policies set forth in these components are general with respect to public lands, but appear to be consistent with the land use classification system approach which is the backbone of this plan.

County general plans vary with respect to the level of detail for those portions of the desert covered by the Desert Plan. Through discussions with county officials and careful review of their general plans, the following conclusions have been drawn:

⊙ Inyo County: Currently, Inyo County is updating its general plan and several elements which are relevant to the desert. Land use zones similar to and consistent with the multiple use classes are being incorporated into their plan. The County Supervisors are, however, concerned about the amount of protection in classes C and L, and the effect that these will have on the mining and recreation activities which are important to the economic base of the county.

⊙ San Bernardino County: The countywide general plan is now being streamlined. Bureau staff has coordinated with the county on planning matters and has reviewed the county's preliminary draft general plan for consistency with the multiple use classes. No significant inconsistencies have been noted between county proposals and the multiple use class approach. County officials have expressed concerns that arise due to the checkerboard land ownership pattern in portions of the county. They also feel that the Desert Plan should be consistent with their adopted Joint Utility Management Program (JUMP).

⊙ Riverside County: The Riverside County General Plan was adopted in 1965 and has been amended numerous times. The open space and conservation elements were adopted in 1973 and contain sets of policies which appear to be consistent with the multiple use class approach.

⊙ Kern County: The Kern County General Plan is in the early stages of revision and was not available for review by staff. However, the general planning policies contained in the present Open Space and Conservation element have been analyzed and appear to be consistent with the multiple use class approach.

⊙ Imperial County: Imperial County officials reviewed the Bureau's planning approach and noted a number of problems associated with use of the public lands. For example, it is suggested that six multiple use classes be established, rather than four, to provide greater flexibility in the zoning of land for specific uses. BLM staff review of the county's open space element revealed that the multiple use class and approach is consistent and would be adequate for carrying out county land use policy on the public lands.

b-2 DETAILED CONSISTENCY REVIEW

The more detailed review for consistency between local plans and the alternatives presented in the draft plan will follow the steps outlined below. Consistency with State and other Federal agency policies and plans will be reviewed in a similar manner.

Step I: Local governments (incorporated cities and counties) have the initial responsibility to compare and identify any inconsistencies between the Desert Plan alternatives and their local plans and policies. This should include:

a. A clear reference to the specific portion of the officially adopted local plan affected and an explanation of how the California Desert Draft Plan is inconsistent; and

b. Any official opinion of inconsistency with local plans verified by action of the legally authorized local government body (elected officers or appointed commissions) which has the authority to adopt and interpret local plans and policies.

Step II: Prior to submitting a final Desert Plan recommendation, BLM will respond to any point of inconsistency remaining in the prepared plan, raised in accordance with Step I. This response will include:

a. BLM's stated agreement or disagreement on a particular point of inconsistency raised and explanation or rationale explaining BLM's opinion;

b. If BLM agrees there is an inconsistency, the reasons for the inconsistency and the possible alternative approaches to be considered in the final plan to resolve the inconsistency; and

c. A rationale for recognized inconsistencies that are due to BLM mandates for land and resources management.

b-3

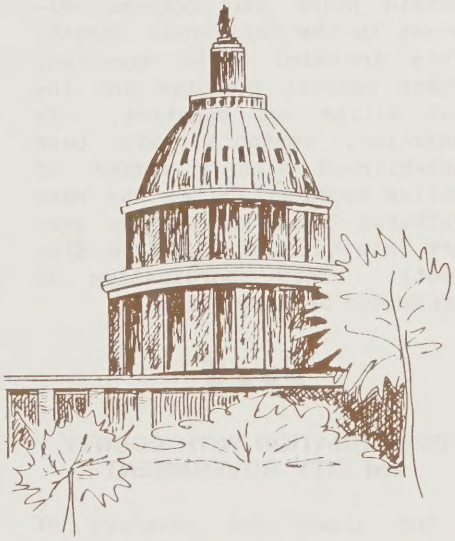
COORDINATION WITH STATE and FEDERAL AGENCIES

Planning coordination with other land management agencies, Federal and State, has been focused on resolving management boundary problems (i.e., "adjacency" conflicts with parks and monuments, military reservations and national forests.) In developing the alternative plans, efforts have been made to establish compatible multiple use classes adjacent to these boundary lines in order to reduce conflicting management practices.

State and Federal agencies which have other interests in the desert, such as California Fish and Game, Caltrans, the U.S. Border Patrol and the Water and Power Resources Service (formerly the U.S. Bureau of Reclamation), were also contacted by BLM staff. Special concerns reported by their agencies were noted and considered in preparing the alternative plans.

Under a joint agreement with the Water and Power Resources Service, BLM manages the surface of lands withdrawn by this agency. These withdrawn lands, predominantly in Imperial County, are presently being reviewed by BLM to determine whether or not they should be returned to full BLM management (removal of the withdrawal status). Those lands which will continue under reclamation status may require special management conditions which will be at variance with the multiple use guidelines (For example, removal of sand and gravel without permit and special processing within Class L). The Water and Power Resources Service has noted that the Wilderness Study Area designations on withdrawn land are inconsistent with their mission and programs.

State and Federal agencies will follow the same review process outlined above for local governments to identify specific planning inconsistencies.

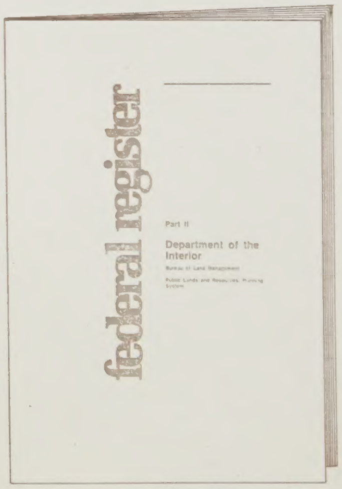


part III-c

Monitoring the Plan

• Monitoring •

Within two years of final adoption of the California Desert Conservation Area Plan, the District Manager will design and implement a monitoring program to measure the plan's effectiveness and needs for subsequent amendment or revision. The monitoring system design, measurement intervals, and standards will be based on the estimated sensitivity of resources to the decisions involved in the plan. Monitoring and evaluation intervals will not exceed five years and, where necessary, will be briefer. Threshold levels will be established and monitored for key resource components such as Threatened, Endangered, Rare, or sensitive species and their critical habitats. When such threshold levels are found to be met or exceeded, corrective actions will be undertaken, including plan amendments if necessary. Similarly, plans of other Federal agencies, State and local governments, and Indian tribes will be followed for changes having a bearing on the California Desert Plan. Other sources of new data of relevance to the plan will also be tracked. All monitoring and evaluation reports will be written and available for public review.



federal register

Part II

Department of the Interior

Monitoring a large comprehensive resource and land use plan can present a large, complex, and expensive task. For the California Desert Plan it will be necessary to select only the significant items with high sensitivity to planning decisions, and within them select key indicators that can be practically monitored. For tracking wide-spreading resource trends, a sound baseline of data will have to be selected from the extremely large amount of information collected in the planning process. In some cases this data will have to be further augmented. Statistically valid sampling systems will then be designed.

Two perspectives of monitoring will be employed. The principal one will be for broad areas, as for common vegetative types or ecosystems. It will be focused on the resources impacted from cumulative sources, with analysis for trends. Extreme variability in local area annual precipitation will make trend verification difficult. Usually, several interrelated resource conditions will be monitored by coordinated data gathering and analysis (e.g., for soil erosion, vegetation and wildlife populations). A second monitoring focus will be the measurement of impacts and mitigation effectiveness of one particular action under the plan on all the resources it is anticipated to significantly affect. Such selected monitoring targets would be very limited but intensively followed where information is needed for a particular class of action on a particular type of site (e.g., a producing hard rock mine in a sensitive environmental zone or an off-road vehicle open play area inhabited by a sensitive wildlife species).

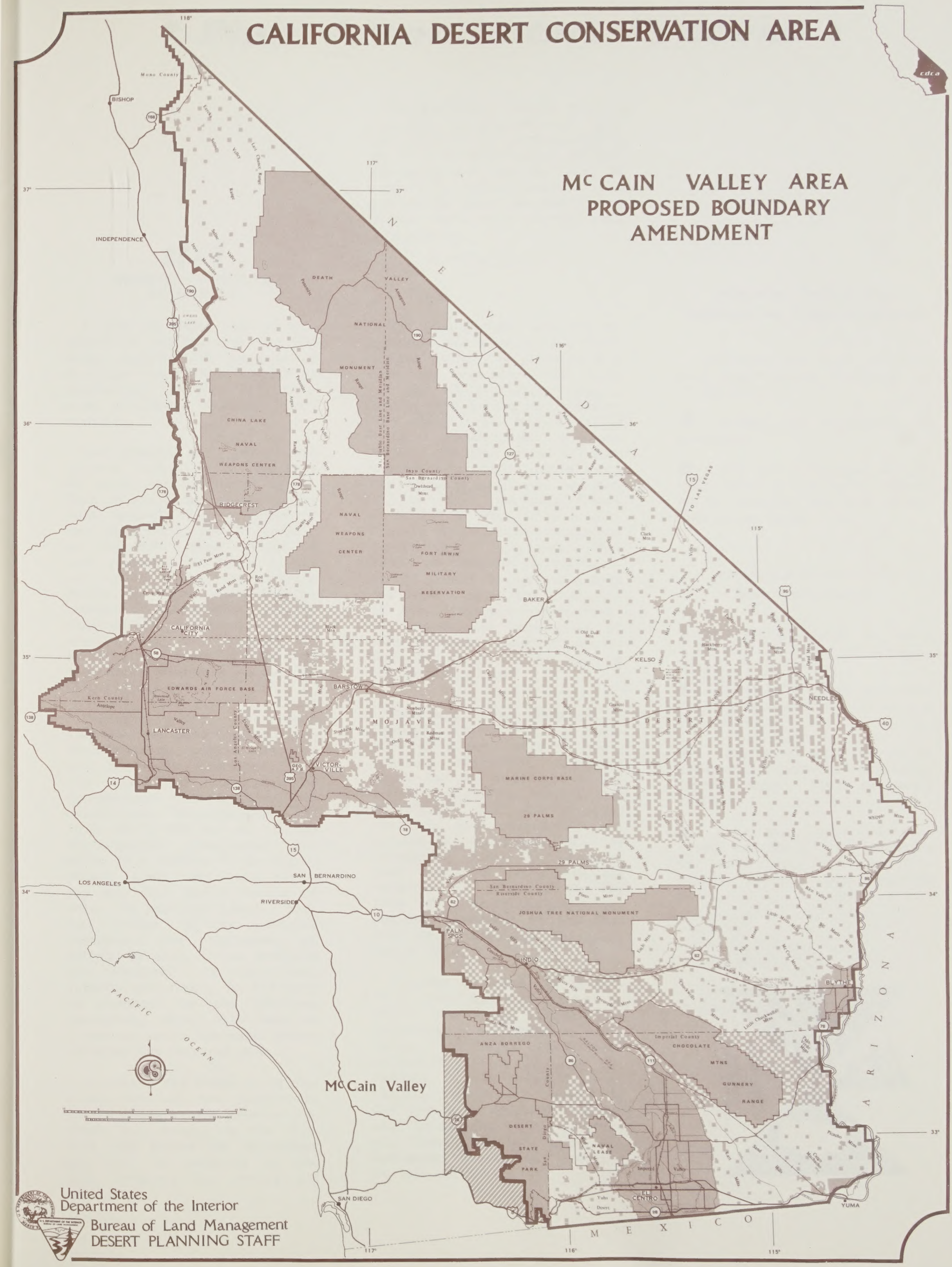
More specific information on planned monitoring efforts is given in a number of the various plan elements. Most give only the items of significance in terms of actions, conditions, and trends targeted for monitoring. General monitoring approaches are given in some cases, but specific designs and standards are left to be determined through the necessary analysis needed for the two-year period following plan adoption.

part III-d

Plan Amendment Process

CALIFORNIA DESERT CONSERVATION AREA

McCAIN VALLEY AREA PROPOSED BOUNDARY AMENDMENT


cdca
Mono County
BISHOP
INDEPENDENCE
NEVADA
DEATH VALLEY NATIONAL MONUMENT
CHINA LAKE NAVAL WEAPONS CENTER
NAVAL WEAPONS CENTER
FORT IRWIN MILITARY RESERVATION
Inyo County
San Bernardino County
RIDGECREST
CALIFORNIA CITY
EDWARDS AIR FORCE BASE
Kern County
Los Angeles County
LANCASTER
VICTORVILLE
BARSTOW
BAKER
KELSO
NEEDLES
MOJAVE DESERT
MARINE CORPS BASE 29 PALMS
29 PALMS
TO LAS VEGAS
SAN BERNARDINO
LOS ANGELES
RIVERSIDE
San Bernardino County
Riverside County
JOSHUA TREE NATIONAL MONUMENT
PALM SPGS
INDIO
BLYTHE
ARIZONA
PACIFIC OCEAN
Imperial County
CHOCOLATE MTNS GUNNERY RANGE
ANZA BORREGO DESERT STATE PARK
NAVAL LEASE
McCain Valley
SAN DIEGO
EL CENTRO
YUMA
MEXICO
118°
117°
116°
115°
37°
36°
35°
34°
33°
Miles
Kilometers

United States
Department of the Interior
Bureau of Land Management
DESERT PLANNING STAFF

• Plan Amendment Process •

The California Desert Plan is designed to provide both predictability in decision-making as well as flexibility to meet unanticipated demands and to respond to future events. The process of plan amendment described below will provide that flexibility.

* * *

d-1

REQUESTS FOR PLAN AMENDMENT

A plan amendment may be initiated at any time by the BLM State Director in response to findings under the continuing monitoring, review, and revision procedures discussed previously.

Individuals and public and private organizations desiring to amend the California Desert Plan or its elements may submit such requests for amendment to the California State Director of the BLM. Upon receipt of such request, the State Director will respond in writing within 30 days, acknowledging receipt of the request and informing the applicant of the process to be followed in studying and deciding upon the requested amendment under 43 CFR 1601.6-3 (b).

Amendment will be made through the environmental assessment and public involvement processes prescribed in 43 CFR 1601.3 and fulfillment of interagency coordination and consistency requirements set forth in 43 CFR 1601.4. If the environmental assessment results in a finding of no significant impact, the State Director may file public notice of this. He may then issue a public notice on the intended amendment and implement it within 30 days if no protests are received. If significant impacts are found, an EIS will be prepared on the proposed amendment, which will then be processed under the same procedures as the original plan.

Proposals for revision of the boundaries of the California Desert Conservation Area or request for changes in the Federal Land Policy and Management Act will be referred to the U.S. Congress for review and decision.

The need for one boundary adjustment has already been identified during the planning process and concurrent BLM study of the administrative organization best suited to implement the plan. The McCain Valley Area, encompassing approximately 150,000 acres of BLM-administered public lands along the present southwest boundary of the CDCA, has been determined to be, from both an ecological and resource management perspective, an area that should be included in the California Desert Conservation Area and managed under the framework of the California Desert Plan. The approximate boundaries of this proposed boundary amendment are shown on the map on the following page.

Following plan adoption, a precise determination of boundary adjustment will be made, existing Management Framework Plans for the area will be reconciled to overall Desert Plan guidelines, and the proposed revision, with appropriate environmental assessment, will be processed under the standard plan amendment procedures and referred to Congress in the form of a draft boundary adjustment amendment to the Federal Land Policy and Management Act of 1976.

Proposed revisions of 1) multiple use classifications or their boundaries, guidelines, objectives, or decision criteria; 2) major FLPMA-prescribed policy; or 3) major revisions in plan elements, including significant changes in use levels or facility location will be decided by the California State Director under the amendment procedures outlined in this section.

Information Required from Individuals and Private Organizations

Requests for plan amendment must contain the following information:

- ■ Reason for requesting an amendment.
- ■ How the individual or organization is adversely affected by existing portions of the California Desert Plan.

Information Required from Government Agencies

If request for amendment is being submitted by an incorporated city:

- ● Request for plan amendment must be approved by vote of the City Council.
- ● City must show how it is adversely affected by the California Desert Plan or parts thereof.
- ● City must show how proposed amendment is necessary for consistency with the officially adopted city general plan.

✓If the request for amendment is submitted by a county or a county service area:

(1) Request for amendment must be approved by vote of the Board of Supervisors.

(2) County must show how it is adversely affected by the California Desert Plan or parts thereof.

(3) County must show how the proposed amendment is necessary for consistency with the officially adopted county general plan.

▼

✓If request for amendment is being submitted by a department or office of the Executive Branch of the State of California:

(1) Request for amendment must be approved by the Governor.

(2) State must show how it is adversely affected by the California Desert Plan or parts thereof.

(3) State must show how the proposed amendment is necessary for consistency with adopted State plans or programs.

▼

✓If the request for amendment is submitted by a department, office, or bureau of the Executive Branch of the U.S. Government (other than the BLM):

(1) Request for amendment must be approved by the director of the submitting department, office, or bureau.

(2) Agency must show how it is adversely affected by the California Desert Plan and parts thereof.

(3) Agency must show how the proposed amendment is necessary for consistency with officially adopted plans or programs.

d-2

BLM INITIATED PLAN AMENDMENTS

A BLM-initiated plan amendment or plan element amendment must follow all procedures in 43 CFR Part 1600, including:

(1) Public notification and participation;

(2) Coordination with State and local governments;

(3) Determination of environmental effects;

(4) Development of criteria tailored to the proposed revision issue; and

(5) Approval of revision by State Director.

d-3

ANALYSIS

■ Analysis of Proposed Amendments: In analyzing an applicant's request the State Director will:

(1) Determine if any law or regulation prohibits the applicant's requested amendment;

(2) Determine if alternative locations within the California Desert Conservation Area are available to meet the applicant's needs which do not require a change of land use classification or amendment of any plan element;

(3) Determine the environmental effects of the applicant's request;

(4) Consider the economic and social impact of the applicant's request;

(5) Provide opportunities for and consider public input to the proposed amendment, including input from State and local governments; and

(6) Evaluate the effect of the proposed amendment on the desertwide balance between resource use and resource protection.

d-4

DECISION

■ Decision Criteria for Approval or Disapproval: In approving a plan amendment the State Director must determine that the proposed amendment will be in accordance with applicable laws and regulations and will provide for the immediate and future management, use, development, and protection of the public lands within the California Desert Conservation Area. The State Director will base his rationale for such determination on the principles of multiple use and sustained yield and maintenance of environmental quality.

d-5

PUBLIC NOTIFICATION

■ Public Notification: Notification of amendments to the California Desert Conservation Area plan will be published in the Federal Register. In addition, notice will be published in a newspaper or newspapers of general circulation in the area affected by the amendment(s). Further, a plan amendment mailing list will be developed and will include appropriate publications which publish material of interest to people concerned about public lands of the California desert. All individuals, organizations, and other public agencies requesting notice of plan amendments will receive such notices. All notices and information will be published no later than 30 days prior to the first public hearing.

All county boards of supervisors and all city councils whose incorporated limits and spheres of influence encompass the land area affected by a plan amendment proposal will be notified of such application for amendment no later than 30 days prior to any scheduled public hearings.

d-6

PUBLIC HEARINGS

■ Public Hearings: Before the State Director makes final decisions, he may hold one or more public hearings to consider plan amendment proposals.

PART IV

draft
E.I.S.

ENVIRONMENTAL
IMPACT
STATEMENT

part IV-a

Introduction

INTRODUCTION

Strategy

a-1

The first part of this plan and EIS describes the Desert Plan Alternatives, their strategy for implementation, their multiple use classes, program elements, and Areas of Critical Environmental Concern. It serves two functions: to state the plan alternatives and to provide the "Purpose and Need for Action" and "Alternatives Including the Proposed Action" sections of the EIS. As indicated earlier, no "Preferred Alternative" can be identified at this stage and the Proposed Action will be developed after receiving public review and comment on the Draft Plan Alternatives and EIS.

The following part of the document, titled "Environmental Impact Statement," presents the "Affected Environment," "Environmental Consequences," and other EIS sections called for under CEQ regulations.

Designed to provide a summary of the major impacts of each alternative, the EIS omits most background data and emphasizes significant impacts. The documentation and supporting material that explains how the impacts were derived has been placed in the appendices.

Chapter A is the introduction. Chapter B contains a description of the environment affected by the alternatives. This provides a baseline against which the impacts of each alternative can be measured. Chapter C includes a summary of the cumulative impacts of each alternative, indicating how each alternative affects the environment. It also contains a summary of the significant impacts of each element and Area of Critical Environmental Concern (ACEC). This describes the specific impacts of the various plan actions desertwide and also points out specific impacts where site-specific management decisions will be required. Final chapters discuss adverse impacts which cannot be avoided, the relationship between short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and any irreversible or irretrievable commitments of resources.

A problem of evaluation is posed by the general nature of the alternatives. In most cases, the alternatives establish broad land use guidance. Since decisions about the specific location and nature of a use are intended to be made in conjunction with individual project proposals, it is difficult, if not impossible, to predict specific impacts associated with any alternative. This difficulty requires that the assessment be developed at a more general level of analysis than an individual project would involve. In the future, an Environmental Assessment or Environmental Impact Statement will be prepared for each major project.

Another problem is posed by the regional level at which EIS is prepared. The EIS tends to "average out" impacts to maintain a desertwide perspective. While a wide range of potential impacts is revealed when the plan actions are considered on a localized basis, this document consolidates this range and indicates the predominant impact over the CDCA as a whole.

The impact analysis is based on a number of assumptions. First, all impacts are the sum total of impacts expected during the period 1980-2000. Second, any alternative, if selected, would be fully implemented by the year 2000. Additional funding is anticipated, but general budgetary constraints at all levels of government are expected in the initial years. Third, impact conclusions are based on reasonable scenarios and do not necessarily represent a "worst case" situation. Finally, environmental laws, policies, and regulations will be in effect during this period and may mitigate potential impacts.

Appropriate environmental safeguards would be applied to individual project proposals in all alternatives in order to reduce or avoid potential adverse impacts. While none of the plan alternatives contain specific mitigating measures, the multiple use guidelines themselves help to insure that adverse environmental impacts would be minimized. Furthermore, an Environmental Assessment or Environmental Impact Statement will be prepared for each major project proposed in the CDCA, as required by NEPA. Specific mitigation measures would be tailored to the individual circumstances of the project involved.

While many of the findings in this document are based on actual field studies undertaken in the CDCA, a large part of this statement rests on the professional judgment of BLM staff members. A summary of assessment methodologies and their reliabilities used by each discipline follows.

Although each of the different resource analyses started from the same baseline and assumptions as assessments of environmental impacts were prepared, one significant variance in approach developed and must be noted at this point. In the assessment of cumulative impacts of wildlife resources, the technique used went beyond assessing impacts as negative or positive from a baseline of current condition and trend. The reasoning for this departure from the standard approach was that even if positive impacts are obtained through the plan alternatives in lessening or slowing the impacts or rates of decline to significant, sensitive, Rare, or Threatened and Endangered species or habitat, many of the impacts that remain are still significantly negative if condition and trend are still poor or downward in such vulnerable species.

Some of these species and their habitats are wide-ranging throughout the CDCA; others are very limited. The wildlife cumulative impact assessment is focused almost entirely on residual negative impacts. The reader should note that, in order to express fully the potential for impact, in a number of instances a "worst case" impact situation from within a wide range of potential impacts is forecast. The result is that all alternatives appear harmful from this wildlife point of view, leaving the choice for the future as one of lesser evils.

This assessment is useful if the reader keeps the caveat in mind that the approach is somewhat different than that used for other resources, and understands that the wildlife impact assessment does not present total wildlife impacts in the same perspective due to its focus on the residual negative impacts.

More detailed discussion of how the wildlife impacts section should be read in connection with positive impact information contained within the Plan Alternatives portion of this document, is provided in the section of this EIS where cumulative wildlife impacts are presented.

a-2
Methodology and Reliability

AIR QUALITY

In the evaluation of air quality, available data from utilities, local air pollution control districts, California Air Resources Board, and private consulting companies were reviewed. In addition, the BLM contracted two aerial sampling studies to provide supplementary information. Despite these efforts, knowledge of CDCA air pollutant levels, emission sources, and dispersion characteristics is very limited. Reliable quantitative predictions of air quality impacts are not possible without site-specific information on ambient pollutant concentrations, meteorological dispersion potential, and source configurations. The air quality impact projections are based upon observed impacts from previous pollutant sources of a similar nature. When details of specific projects become available, more refined impact evaluations can be prepared.

WATER

Collecting and synthesizing water resources data has provided maps of groundwater basins, drainage basins, wells and stream gaging stations and water quality studies of three riparian areas. Such data provides only a limited understanding of the water resources of the CDCA.

Whether impacts are beneficial or adverse, impacts to water resources are based on beneficial uses of water. A negative impact is any action potentially detrimental to beneficial uses. A positive impact is assumed when beneficial uses are enhanced by an action. The nature and magnitude of impacts were evaluated on a level of detail commensurate with the level of detail of the actions described in the plan. In most cases, the scope of the plan allowed only a general analysis of impacts.

SOILS

Studies of soil compaction by ORVs and subsequent impacts on annual vegetation have been done by BLM (1977-1979). These studies evaluated the impact of four-wheel drive vehicles, motorcycles, and man on soils. Tests were made at three sites under varying soil moisture conditions using a recording penetrometer to measure soil mechanical impedence. The soil compaction was compared to annual response over a period of two years. Studies by Webb (unpublished report 1979, on the impact of motorcycles on soil), Gillette (1979, on threshold wind velocities on disturbed and undisturbed surfaces), Giroux (unpublished BLM study 1979, on dust emission from ORV races), and Iverson (unpublished report 1979, on increased runoff from hillclimb areas) examined the impacts of ORVs on soil in the CDCA. BLM also measured soil compaction in Dove Spring, Bird Spring, Horse Canyon, Johnson Valley, and Plaster City over the past three years. Leathers (unpublished BLM studies, 1977-1979) examined hundreds of soil samples to determine presence or absence of valley fever fungus at the Teagle Wash, Dove Spring, Jawbone Canyon, Johnson Valley, Plaster City and Yuha ORV use areas.

The impacts of grazing on soil compaction was studied in Lanfair Valley, Horse Canyon, Bird Spring and McCain Valley at holding areas watering areas, trails, and general grazing areas. The watershed inventory data of 1971-1972 was compared with 1975-1976 inventory data of the east Mojave to evaluate erosion condition and trend in that area.

The impact of utility corridors on soil was evaluated with studies by Lathrop (BLM studies 1978) and Clark (BLM study 1979). Penetrometer readings and bulk density samples were taken along various power lines and pipeline corridors which were constructed between 1924 and 1977. The reliability of the preceding assessments is good for the areas sampled and uncertain in unsampled areas.

The impact assessment of wind generation sites, power plant sites KGRAs, interpretive and research facilities, Land Tenure Adjustment Element, Cultural Resource Element, Wildlife Element and Mineral Exploration and Development Element were estimated by extrapolating results from studies of ORVs, utility corridors, and other surface disturbances which create similar impacts.

WILDLIFE

The methodology used to determine the impacts of each alternative can be divided into four phases.

Phase 1. Compiling existing data on the effects of a particular resource activity on wildlife species and habitats.

Phase 2. Determining the acreage and proportion of a species range or special habitat area affected by a single resource activity.

Phase 3. Predicting the nature and severity of impacts of a single resource activity on wildlife resources. Whenever possible and appropriate, impacts were rated on qualitative and quantitative scales.

Phase 4. Assessing the cumulative impact of all resource activities on wildlife resources when considered simultaneously.

Sources of information used during Phase 1 included: published literature, technical reports and papers, unpublished research, BLM contracts and reports, and personal observations. Several in-depth annotated bibliographies and papers were prepared on selected impact topics to summarize and to analyze critically the available information and data. Papers analyzing the effects of a single resource activity on wildlife included: general recreation, geothermal development, utility corridors, wind generation plants, agricultural and urban developments. Annotated bibliographies were prepared on wild horse and burro grazing and livestock grazing.

In Phase 2, the amount of known or potential habitat was estimated for 13 State and federally listed species, one BLM sensitive species, 32 significant species, and seven assemblages of endemic sand dune beetles. Species ranges were determined from an analysis of published literature, museum records, BLM contract reports, and site records of State, Federal, and independent biologists. The acreage in each of 70 special habitat areas was also determined.

Three analytical techniques were used in Phase 3 to predict the nature and severity of impacts: 1) direct comparisons of cause and effect; 2) indirect comparisons of cause and effect; and 3) best professional judgment of one or more experts. Direct comparisons of cause and effect were possible in many cases where studies had been conducted at the same sites subject to a proposed activity, i.e., the effects of general recreation on birds in Afton Canyon, the effects of motorized vehicles on vertebrates in Dove Springs Canyon, and the effects of burros on vegetation in the Panamint Mountains. Indirect comparisons of cause and effect involved analyzing studies in similar or comparable areas and extrapolating results to site-specific areas in the CDCA. Examples using this technique included: comparing impacts of feral burros on wildlife habitat along the Colorado River and in desert parts of Arizona with potential impacts on similar habitats in the CDCA; and extrapolating impacts of paved and dirt roads on various species of wildlife from numerous published articles of research done elsewhere in the U.S. Best professional judgment was used when similar studies and data were lacking. Professional judgment was used also throughout the impact assessment process when applying indirect cause and effect techniques. In general, the most reliable technique is the direct comparison, followed in descending order by indirect comparisons and best professional judgments.

In Phase 4, the severity of cumulative impacts on a desertwide basis was evaluated on the following scale:

1) Impacts were considered severe where potential disturbance would result in total habitat loss, as is expected to occur at wind generation and microwave sites, ORV open areas, as well as in areas with combinations of three or more of the activities listed in 2) below.

2) Impacts with high disturbance to wildlife result where one or two of the following occur: utility corridors, locatables, leasables, livestock grazing, wild horse and burros, existing roads and trails, and KGRAs.

3) Low positive or negative impact occurs with designated roads and trails, in Class L areas with no specifically cited impacts, in wilderness areas where livestock grazing and/or wild horses and burros occur and where a special wildlife habitat management area exists, or in group 2) areas if a special wildlife habitat management area exists.

4) Positive impacts occur in wilderness areas, some wildlife habitat management areas, and in Areas of Critical Environmental Concern established for nonwildlife resources.

5) Highly positive impacts occur in Areas of Critical Environmental Concern of critical importance to wildlife, where management prescriptions will be designed to protect these resources.

The overall reliability of the assessment depends upon the accuracy of the techniques used and the validity of a number of basic working assumptions. Some major assumptions are:

1) Elements and class guidelines do not conflict.

2) Programs specified under all alternatives are being implemented in the No Action Alternative or will be fully implemented under all three action alternatives.

3) The "carrying capacities" estimated for grazing allotments approximate the actual "carrying capacities" of the habitat.

4) The estimated range condition and range trend values closely approximate actual field conditions; further, range assessments are meaningful for wildlife.

5) Estimates of burro numbers and recruitment rates closely approximate actual population parameters.

WILDERNESS

Impacts to wilderness were predicted based on a direct comparison between the total number of acres found suitable for designation in each alternative and those acres which possess wilderness values (Wilderness Study Areas), but were found unsuitable and therefore would not be protected by wilderness designation.

The reliability of the suitability determinations is considered to be high, as well-defined criteria were used to determine the existence or nonexistence of wilderness values (2(c) criteria of the Wilderness Act of 1964) in the inventory phase and direct comparison between competing resource values were used to determine suitability in the study phase.

CULTURAL / NATIVE AMERICAN

The estimation of potential impacts to cultural resources and Native American values involved: (1) a review of the few baseline studies concerning project-related impacts on archaeological sites; (2) a contracted report on "Threats and Causes of Damage to Archaeological Sites in the California Desert during the 20th Century" (Lyneis and Weide 1979); (3) a review of archival ethnographic and ethnohistoric literature on Native American groups in the California desert, (4) a review of other EIS documents related to some of the proposed actions of this project; (5) personal observations; and (6) professional judgment.

Using the above procedures the impact intensity and extent was determined for the Cultural Resource/Native American element in relation to other plan elements and the four plan alternatives. The tools for this analysis included: (1) cultural resource/Native American sensitivity and significance maps developed from the existing data base; (2) a sensitivity map of Early Human sites including predictive data on the probable distribution of buried sites in the California desert (Davis 1979); (3) a locational map of significant historic trails and wagon roads from 1776 to 1880 (Warren and Roske 1979); (4) a locational map of National Register of Historic Places which have been listed, determined eligible, or are currently under register review; (5) an estimation of historic and prehistoric site densities statistically derived from known site types and distributional patterns; and (6) site sensitivity and locational data on areas of Native American traditional cultural, ritual, and religious importance.

In the cases of proposed actions and locatable impacts, it is possible to predict the effects of these activities on cultural resources. In the case of regional actions, or "no action," it is impossible to evaluate the potential effects of projects or actions at unspecified locations on a little-known resource base. Less than five percent of the California desert has been subject to field survey. In many cases predictions of site occurrence and sensitivity/significance are based upon a systematic sample of as little as one percent of the resource base. In other cases some complimentary data from literature review and ethnological research augment the field inventory. There is a large margin for error in the analysis.

A major shortcoming in the impact analysis for cultural and Native American resources is the absence of baseline studies. As a result, it cannot be assumed that this element's components have been accurately located and evaluated. For example, it is difficult to determine the degree of error in many historic documents and maps where archival materials conflict. There has also been inadequate capability to satisfactorily address the variability in impact susceptibility of the various historic, prehistoric, and Native American site types. The greatest single weakness of this impact evaluation is overgeneralization. All of the comments and summary evaluation of impacts in this document were drawn from "representative" cases, and thus tend to gloss the variability among material cultural and Native American resources.

Overall, the reliability of impact assessment for cultural and Native American resources is considered marginal.

VISUAL RESOURCES

The assessment of potential visual impacts was done on two levels of detail:

1) Comparison of guidelines (Visual Resource Management vs. Multiple Use Class)

2) Application of Visual Contrast Rating System on the proposals in each element.

Resource management actions were evaluated in a programmatic fashion based on professional judgments on typical designs, likelihood of development, action location, etc.

The reliability of the scenic quality impact assessment is considered to be high, while visual sensitivity and visibility impact assessment is moderately high.

RECREATION

The large size of the desert and the variety of recreational opportunities made it necessary to use a variety of data collecting techniques in building the recreation data base. The reliability of this information varied.

Data collected by the Bureau provided the most reliable source, i.e., aerial flight visitor counts. Surveys and polls such as Fieldscope Survey of California Residents, 1977 and SRI Survey of Desert Residents, 1978 provided a less reliable data source. Studies of pertinent literature, informal discussions, and public interviews which were subjective in nature, suffered most in reliability. Best professional judgment was often used in applying those less reliable data sources. Reliability of all methods was directly related to current information.

The analysis of impacts was conducted, in most cases, through a direct comparison of recreation resource overlays with those of other resources and the multiple use class overlays and maps. Even though impact assessments were derived through direct comparison, most of the recreation overlays were developed from surveys, polls, informal interviews, and best professional judgment. Because recreational impacts are highly variable, the reliability of the analysis of impacts would be low to moderate.

Impact assessments relative to recreation should not be considered absolute due to rapid changes in recreational user trends. However, these impact assessments would be considered adequate for decision making if supported by monitoring after plan implementation.

RANGE AND VEGETATION

Three basic techniques were used to analyze the impacts of the elements of the Desert Plan on desert vegetation: direct analysis of cause and effect, indirect analysis of cause and effect, and best professional judgment. The method used in a particular case was chosen as a result of the availability (or lack) of specific data, information regarding similar cases in the literature and personal observation and experience.

An example of direct cause and effect analysis is that conducted to determine the impacts of off-road vehicles on the vegetation of Jawbone Canyon, Dove Springs, and Stoddard Valley Open Areas. Site-specific data on impacts to vegetation in these areas have been developed under BLM contract. Indirect cause and effect analysis was used in extrapolating results of these studies to other similar areas. Best professional judgment was used when specific data were not available. For example, off-road vehicle effects on desert dune vegetation was assessed from studies done on both coastal dune systems and desert dunes.

In order to evaluate the impacts of livestock grazing on vegetation within allotments in the CDCA, projections of the future trend, condition, and production were developed for those allotments containing significant amounts of perennial forage plants. In this way a standard could be used to describe the present health of the range and estimate the direction to which it would go by applying the management prescribed by the various alternatives.

Those allotments composed primarily of ephemeral vegetation could not be subjected to the same analysis since the variability of species composition and production is not a direct result of grazing alone, nor can its potential be established.

The analysis of the allotments on Table GR-1 to 5 incorporated the following decision criteria:

1. Allocation must be at or below carrying capacity for any improvement in condition, trend or forage production.

2. Potential for vegetative response must be present for any increase in forage production.

3. Present condition, trend and forage production will be used as a baseline for 20-year projection.

4. Key vegetative species will be used as an indicator of improvement in condition, trend, and forage production.

5. Management practices proposed will be considered as positive measures in any improvement in condition, trend, or forage production.

6. Except for the No Action Alternative, which maintains grazing at present levels, all alternatives will be guided by the multiple use classes in determining the vegetative condition, trend and forage production objectives.

Production projections were derived from personal judgment of field personnel familiar with the listed allotments estimating the anticipated condition and trend and allotment vegetative potential at the end of 20 years. These projections were subjected to a probability model with specific values given to the degree of change over time with variables that were consistently applied on an allotment-by-allotment basis.

These projections are arranged by alternative, with the Use, Balanced, and Protection Alternatives being combined; the total allocated forage does not change between these alternatives but merely shifts from one class of grazing animal to another. The No Action Alternative assumes all uses are held at present levels of management and use. The No Grazing Alternative assumes that only livestock will be totally removed, with wild horse and burro numbers held to the level prescribed under the Protection Alternative.

Significant impacts of the alternatives were assessed by direct observation and comparison of the recorded impacts of the various elements on vegetation. Cumulative impacts were determined by arranging all of the impacts of all elements by alternative, then "averaging" across elements from each alternative

Reliability of impact analyses depends in part on the nature of the assessment technique. Direct cause and effect analysis is more reliable than indirect, which in turn is more reliable than best professional judgment. Reliability also depends upon the accuracy of the information presented in the various elements and upon assumptions of full compliance and implementation. The overall reliability of the assessment is moderate.

SOCIOECONOMIC

The socioeconomic impacts shown in this environmental impact statement are believed to be both reliable and adequate for decision making on plan alternatives. Baseline information on the socioeconomic characteristics was derived primarily from a series of reports prepared for BLM in 1978 by SRI International of Menlo Park, California. This information was then used in obtaining an overall perspective on the potential of the plan alternatives to affect the major socioeconomic components of the CDCA, southern California, and the entire State of California. Analysis of the specific resource elements relies more heavily on the experience and data collected by BLM resource specialists.

The analysis of impacts to utilities is based on the synthesis of information presented by representatives of southern California utilities and the California Energy Commission. Since the future needs of utilities are still uncertain, impacts have been generalized at a level appropriate to the current state of knowledge and specificity of the plan alternatives. The actual site location for conventional and wind-powered generating facilities is unknown and is the greatest limiting factor on assessment of impacts to utilities.

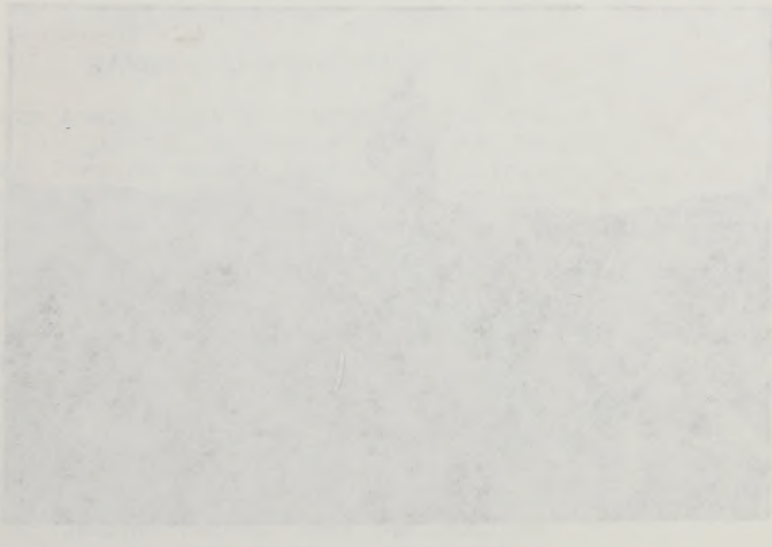
The impact to livestock grazing is based on an allotment-by-allotment analysis. The major limiting factor in the analysis is the variability of growth of ephemeral forage. A secondary limit is the level of knowledge of how each of these allotments is used by the livestock operator. Relative to potential for socioeconomic impacts, the livestock grazing element is the best understood element in the plan.

Impacts to mineral development are based largely on the potential future value of minerals which are not yet located or not now economically developable. The assessment of geothermal potential has the most reliable data base. The dollar values shown are highly speculative and indicate the order of magnitude of the resource potential. These values, except for geothermal, are "mine mouth values" and therefore are not a net of all extraction costs.

The recreation use projections are based on BLM's estimate of visitor use. The largest component of visitation, dispersed use, is subject to argument because it is difficult to define and observe. The estimates of off-road vehicle use are the most reliable of the recreation parameters. This is the result of its being the easiest to observe and having received the greatest amount of field study. Likewise, a large amount of public comment on the subject has been collected by BLM. Overall visitor use is more difficult to project and has been shown as a range reflecting this uncertainty.

Impacts to mineral development are based largely on the potential future value of minerals which are not yet "proven" or not yet economically recoverable. The development of geothermal potential has only recently begun. The [illegible] are highly speculative and [illegible] the range of [illegible] in the resource potential. These values, [illegible], are [illegible] with [illegible] of all [illegible] wells.

The geological and geophysical data available [illegible] the largest component of [illegible], [illegible] is difficult to [illegible]. The [illegible] will have the more reliable [illegible] in the [illegible] of field studies. [illegible] has been [illegible] to [illegible] and the [illegible] reflecting [illegible].



are reduced, with only [illegible] with [illegible] to the least [illegible] the Production Alternative.

Significant impacts of [illegible] were assessed by direct [illegible] of [illegible] surface [illegible] of [illegible] depending on [illegible] by [illegible] alternative.

Reliability of impacts and [illegible] rests in part on the nature of the [illegible]. Direct cause and effect analysis is more reliable than [illegible]. Reliability also depends upon the adequacy of the information [illegible] the various elements [illegible] upon [illegible] of full compliance and [illegible]. The overall reliability of the assessment is moderate.

SOCIOECONOMIC

The socioeconomic impacts [illegible] environmental statements were believed to be both reliable and adequate for decision making on [illegible] alternatives. Data [illegible] the socioeconomic characteristics was derived primarily from a series of reports prepared for BLM in [illegible] Santa Fe, [illegible] in summing an overall [illegible] potential of the [illegible] alternatives in [illegible] of the [illegible] southern California [illegible] of [illegible] specific [illegible] with [illegible].

The analysis of impacts to [illegible] based on the analysis of [illegible] by [illegible] California [illegible] energy [illegible] of [illegible] have been [illegible] at a level appropriate to the current state of knowledge and specificity of the plan alternatives. The actual site location [illegible] and wind-control [illegible] facilities is [illegible] and is the greatest limiting factor on [illegible] of impacts to [illegible].

The impact to livestock grazing is based on an [illegible] allotment analysis. The major limiting factor in the analysis is the variability of [illegible] on [illegible] ranges. A secondary limit is the level of knowledge of how each of these allotments is used by the livestock [illegible] potential for [illegible], the livestock grazing element is the best understood element in the plan.

part IV-b

Affected Environment

Affected Environment

Section B describes the present condition of those components of the environment likely to be affected by implementation of the alternatives. Those resources which will be most seriously impacted are described in the greatest detail; the depth of treatment of resources which will be less significantly affected is correspondingly shallower.

b-1

1- AIR QUALITY

Air quality is routinely monitored in urban areas of the desert by local air pollution control agencies. Supplemental data has been collected in some rural areas by utilities, the California Air Resources Board, and BLM. Despite these sources, air quality data for the CDCA are quite sparse.

Most air pollution is transported into the desert from the Los Angeles Basin by the prevailing winds. Ozone and other photochemical oxidants are the most important pollutants. These substances can cause respiratory irritation, burning eyes, reduced visibility, and damage to vegetation.

All six of the regulated pollutants are present in the CDCA to some degree. Ozone is the most severe pollutant affecting the desert. Thus, overall air quality can be evaluated on the basis of the number of days on which the ozone standard was exceeded in 1977 (the last year for which data are available). Those locations with more than 75 days exceeding the ozone standard were classified as having poor air quality, while those with less than 25 were considered good. Areas with between 25 and 75 violations per year were considered as having fair air quality. Under these criteria, approximately 10 percent of the CDCA has poor, 15 percent has fair, and 75 percent has good air quality. Data suggest that only the northern and eastern sections of the CDCA never exceed at least one of the air quality standards.

Areas with the highest number of days exceeding the Federal and State standards are at the entrances of passes that admit air from the Los Angeles Basin. For example, the Coachella and Antelope Valleys have experienced significant deterioration of air quality in recent years, due primarily to increased urbanization within the Los Angeles Basin. In 1977, the towns of Palm Springs, Indio, Banning, and Lancaster had more than 100 days exceeding the Federal standard for ozone (1 hr. avg. 03. 08ppm). The town of Victorville had 96 days and Barstow had 54 days exceeding the Federal standard. Under some weather conditions, traces of Los Angeles Basin pollutants have been observed as far north as Death Valley and as far south as the Imperial Valley.

A fundamental assumption with respect to impact on air quality resulting from any of the plan alternatives is that air quality within the CDCA will continue to be heavily influenced by transport of air pollution into the desert region from major population centers, particularly the Los Angeles Basin.

Although ozone transport into the CDCA presents a problem in compliance with ozone standards, the vast majority of activities and uses of land within the CDCA will have little influence on the ozone levels observed throughout the desert regions.

The air pollutant emissions which result from activities within the CDCA and which are controlled by the various alternatives are primarily total suspended particulates (TSP) and sulfur dioxide. Thus, the baseline for assessing the impact of the action alternatives would be based upon the existing TSP levels and SO^2 levels measured throughout the communities in the CDCA.

The transport of ozone into the CDCA does provide an indicator of the meteorological factors (wind speed, direction, atmospheric stability) influencing the dispersion and transport of pollutants generated within the CDCA.

Visibility is probably the most important air quality factor within the desert region and is the most easily impaired by activities within the CDCA that would generate dust (especially fine particulates) and sulfur dioxide.

Impact visibility from pollutants transported from the major urban centers is likely and, when present, is probably in the form of widespread regional haze. The urban plume from the Los Angeles Basin frequently impairs visibility in the Joshua Tree National Monument region of the CDCA.

In general, visibility within the CDCA is very good to excellent, ranging from an annual mean visual range of 25 miles along the western boundary to 70 miles along the eastern boundary of the CDCA. In some portions of the Death Valley area the visual range is 90 miles.

Local pollution sources in the desert consist primarily of particulate matter from off-road vehicles, windblown soil, mining operations, and agricultural activities. These sources occasionally cause violations of the particulate standards at many locations. The percentage of sampling (every 6th day) days in 1977 in which the State standard for total suspended particulate was exceeded in 1977 is as follows:

Calexico	92 percent
Needles	55 percent
Brawley	88 percent
Indio	42 percent
Barstow	71 percent
Banning	33 percent
El Centro	66 percent
Victorville	22 percent
Trona	60 percent

b-2

2 - WATER QUALITY

⊙ Surface Water

Surface water sources such as springs, seeps, and streams, are rare within the CDCA. The small quantity of surface water has severely limited development to small scale domestic use, agriculture, and livestock and wildlife watering.

The utilization of surface water is restricted by poor quality and high sediment loads. High rates of evapo-transpiration in the desert contribute to the common problem of high quantities of dissolved solids in surface water. High sediment loads associated with flooding are natural phenomenon resulting from poor watershed cover afforded by desert vegetation and the rare but intense rainfall. Flooding not only presents a risk to development but also represents a hazard to human life.

Most surface water used within the CDCA is imported from the Colorado River and through the State Water Project. The Colorado River supplies 4 million acre feet, most of which is delivered to the Imperial, Coachella, and Palo Verde Valleys for agricultural use.

⊙ Ground Water

About 100 areas of known or potential ground water storage, comprising over 16 million acres, have been identified in the CDCA. Ground water development has been primarily for agricultural and domestic use, but this varies from one basin to another. Some basins have virtually no development, while problems of overdraft have occurred in Antelope Valley, Lucerne Valley, Coachella Valley, and the upper, middle, and lower Mojave Valleys.

Use of ground water in many areas is limited by high quantities of dissolved solids. Concentrations of total dissolved solids range from under 500 milligrams/liter to more than 100,000 milligrams/liter. In addition, concentrations of specific chemical constituents, such as flourides, sulfates, boron, and sodium, render some ground water unfit for drinking or irrigation.

b-3

3 - SOILS

Soils will be affected by any activity which disturbs the land surface. Soil sensitivities to surface impacts were grouped into categories of high, medium, and low (see soils sensitivity map at the end of section IV-b). Soils having a high sensitivity to surface disturbance comprise approximately 50 percent of the CDCA, and are associated with the following land forms:

- * Upland areas: include a wide variety of soils which reflect differing parent material, climatic influence, topographic position, vegetation, and influence of time. The steeper slopes and shallow soils of upland areas make these soils susceptible to water erosion, particularly when disturbed.

- * Dissected alluvial fans: include soils transported by water from upland areas during wetter climatic condition than which prevail today. These soils are generally stabilized by a well-developed vesicular crust formed by the action of wetting and drying and a layer of well-sorted pebbles and cobbles called "desert pavement." When these protective covers are disturbed, the underlying soil is highly susceptible to both wind and water erosion.

- * Stabilized windblown sand areas: include low sand dunes usually associated with playas. When stabilized by vegetation, these sand dunes are minimally affected by wind erosion. However, when disturbed, the loosened sand will migrate.

Soils having a moderate sensitivity to surface disturbance comprise approximately 45 percent of the CDCA and are associated with the following land forms:

- * Playas: include fine textured soils of silty clay loam or clay with high concentrations of salts. These soils are susceptible to wind erosion when disturbed. Water erosion does not pose a problem because of the flat terrain involved.

- * Alluvial fans: include soils deposited by water on gentle to moderately sloping surfaces. Desert pavement may exist, but vesicular crusts have not developed to the same extent as the dissected fans due to time of development.

- * Plains: include soils with a wide range of textures--silty clay loam to sand--on generally level slopes. These soils could be susceptible to wind erosion and problems of compaction, especially if wet.

- * Plateaus: include a variety of soils on gentle slopes. The erosion potential of these soils is reduced by the gentle slopes and coarse fragments lying on the surface.

Soils having a low sensitivity to surface disturbance comprise approximately 5 percent of the CDCA and are associated with the following landforms:

Riverwash and sand dunes: include sandy soils deposited by wind or water. These soils are resistent to compaction, but are constantly being shaped by wind and water action. Sloping banks and escarpments along river washes are highly susceptible to erosion, especially when stabilizing vegetation is disturbed.

b-4

4 - ENERGY AND MINERALS

Energy and mineral resources are classified as locatable, leasable, or saleable. About 8.1 million acres of the CDCA have potential for locatable minerals, 8.8 million acres have potential for leasable minerals, and 1.5 million acres may possess saleable minerals.

Nonenergy locatable minerals include copper, lead, zinc, silver, and gold, and some nonmetallic commodities, such as talc and limestone. Six of 16 significant metals are known to exist in the CDCA (significant minerals are those of which 50 percent or more are imported by the United States). There are several operating mines of locatable minerals, 1,941 patented claims, and 19,802 unpatented claims for locatable minerals in the CDCA recorded with BLM as of August 1979.

Energy locatable mineral resources include uranium, thorium, and lithium. About 1.5 million acres have potential for these energy resources. Active exploration occurs in the Panamint Mountains, Mud Hills, Ivanpah Valley, West Ord Mountains, McCoy Mountains, Mule Mountains, and around Midway Well.

Energy leasable resources include oil, gas, and geothermal. There are approximately 8.8 million acres considered to have potential for these resources. Oil and gas are not produced within the CDCA, but areas of active exploration include Mud Hills and the Imperial and Ivanpah Valleys.

Ten known geothermal resource areas (KGRAs) and 24 potential geothermal resource areas (PGRAs) have been defined within the CDCA. Exploration is active in Ihe CDCA, but areas of active exploration include Mud Hills and the Imperial and Ivanpah Valleys.

The nonenergy leasable mineral resources include potassium and sodium. There are 39 areas considered to have potential for sodium and potassium. There are five producing operations in the CDCA.

Saleable minerals include sand, gravel, stone, cinders, common clay, and similar materials. It is estimated that 1.5 million acres may have potential for producing these minerals. Production of saleables has occurred on about 0.7 million acres.

b-5

5 - VEGETATION

The CDCA is not a biogeographic entity; it represents only the western portions of three deserts of southwestern North America: Sonoran, Great Basin, and Mojave. As a consequence, the flora and vegetation viewed in a general sense are comprised largely of types that also occur outside the CDCA. Nevertheless, when viewed from a closer perspective, both the flora and vegetation within the CDCA may be classified into several recognizable subunits.

⊙ Flora

General. Seven floristic subdivisions have been identified: 1) northern Mojave, 2) southwest Mojave, 3) central Mojave, 4) eastern Mojave, 5) south-central Mojave, 6) eastern Colorado, and 7) western Colorado (Table AE-1). Considerable species overlap occurs among the seven subdivisions. Collectively, approximately 1,900 species of plants have been reported in the CDCA. The total numbers of plant species and the numbers designated as Rare, Threatened, or Endangered by Federal and State agencies and the California Native Plant Society within the CDCA are as follows:

Table AE -1
FLORISTIC SUBDIVISIONS IN THE CDCA

	No. of Species	Rare, Threatened Endangered
Northern Mojave	1025	60
Southwest Mojave	525	17
Central Mojave	500	17
Eastern Mojave	735	31
South-central Mojave	700	17
Eastern Mojave	840	28
Western Mojave	672	31

Rare, Threatened, and Endangered Species. Of the 2,100 types of plants which occur within the CDCA, 144 are considered Rare, Threatened, or Endangered by the U.S. Fish and Wildlife Service, and the State of California and the California Native Plant Society. Two species are presently listed as Endangered by the U.S. Fish and Wildlife Service (*Oenothera avita* ssp. *eurekensis* and *Swallenia alexandrae*); and another species, *Astragalus lentiginosus* var. *sesquimetralis*, may be listed in the near future. The State of California has listed *A. lentiginosus* var. *sesquimetralis*, *A. Magdalenae* var. *piersonii*, *Croton wigginsii*, *Cordylanthus eremicus* ssp. *bernardinus*, *Helianthus niveus* var. *tephrotes*, and *Nitrophilia mohavensis* as Endangered and *DeDeckera eurekensis*, *Gallium angustifolium* var. *borregoense*, *Oenothera avita* var. *eurekensis* and *Swallenia alexandrae* as Rare. All 144 are considered Rare, Threatened, or Endangered by the California Native Plant Society.

Rare, Threatened, and Endangered plants include forbs, shrubs, grasses, succulents, and a variety of vines, trees, and one rush-like plant. Fifty-three percent are short-lived perennial plants; 20 percent are shrubs; and 27 percent are annuals. Based on current inventories, 42 percent are located in the northern Mojave; 22 percent each in the western Colorado and eastern Mojave; 20 percent in the eastern Colorado; 12 percent each in the south-central and southwestern Mojave; and 8 percent in the central Mojave. Several species are found in more than one region.

Unusual Plant Assemblages. Unusual plant assemblages are those which can be recognized as being extraordinary, either because of unusual size of individuals, exclusivity within the CDCA, or because of special biogeographic factors. Some unusual instances include disjunction from main population centers (enclaves); elevational, latitudinal, or longitudinal limits; or rarity of occurrence (e.g., riparian areas, springs, and calciphyte assemblages). Rare population structures, including great age or large size, are also recognized as unusual plant assemblages (Table AE-2).

Table AE - 2
UNIQUE PLANT ASSEMBLAGES

I. Great Basin Enclaves

A. Shadow Valley: *Artemisia spinescens* - *Atriplex confertifolia* Association
B. Round Valley: *Artemisia tridenta*
C. Kingston Mtn; Clark Mtn; New York Mtn: *Abies concolor* enclaves
D. Lee Flat; Saline Valley: *Atriplex confertifolia*
E. Western Colorado Desert (In-ko-pah Gorge): *Coleogyne ramosissima* (Blackbrush)

II. Sonoran Enclaves

A. Paloverde/Whipple Mtn: *Sahuaro-Cercidium* Association
B. South Homer Mtn: *Fonugieria splendens* (ocotillo)
C. Lanfair Valley: Semi-desert-scrub steppe
D. Cronese Valley/Sheep Hole pass: *Castela emoryi*
E. Ord Mtn: *Simmondsia chinensis*, Jojaba Limit
F. Piute Wash, Cronese Valley: *Dalea spinosa*

III. Coastal California Enclaves

A. Smugglers Cave: Chaparral
B. Kelso Valley: Oak Woodlands
C. New York Mtn: Chaparral Elements

IV. CDCA Exclusives

A. Eureka Dunes
B. Kelso Dunes
C. Algodones Dunes
D. Chuckawalla Bench Munz Cholla
E. Palm Oases (*Washingtonia filifera*, Western Colorado
F. Limestone Communities (Calciphytes) *Cercosarpus intricata*
G. *Atriplex spinifera*: Antelope Valley
H. *Nolina wolfii*: Kingston Mtns.

Unusual Population Structure
or Expression

A. Ancient *Larrea tridentata* rings in Antelope and Upper Johnson Valleys
B. Mammoth Ironwood (*Olneya tesota*) in the vicinity of Palen Mtns
C. Joshua Tree Forest on Cima Dome and in Shadow Valley
D. Joshua Tree stand in Eureka Valley (northern limit)
E. Ancient Yucca Rings near Fry Mtn
F. Bristle Cone Pine: Inyo Mtn
G. Riparian and Fresh Water
    1. Flowing Water (*Salix*-*Populus*)
    2. Mesquite Clones: Saline Valley
    3. Marshes
H. Davies Valley (*Agave ocotillo*)
I. *Opuntia bigelovii*: Steppladder/Sacramento Mtns
J. Woods Mtn/Hackberry Mtn: Rich Cactus flora
K. *Castela emoryi*: Yuha Desert
L. *Koberlina spinosa*: Picacho Peak (N. slope)
M. Giant *Yucca schidigera*: north of Essex
N. Joshua tree clones: east base of Tehachapis; desert slopes of S.G. and S.B. Mtns above 4000'; Transverse Ranges
O. Desert Willow Community (Mojave sink)

⊙ General Vegetation

Only a few hundred of the approximately 2,000 species of plants in the California desert contribute significantly to the vegetational aspect. Vegetation of the CDCA is comprised of small trees, shrubs, succulents, and herbs. Herbs are represented by perennial and annual types. These growth forms may occur almost exclusive of one another or, more commonly, are intermingled to make complex vegetation patterns (see map of general vegetation cover types at the end of section IV-b).

* Shrubs. Desert scrub and shrubland occupies approximately 80 percent of the CDCA. The bulk of the plant biomass is made up of shrubs. Shrub ground cover ranges from less than one percent to over forty percent. Stands of creosote bush and its common shrub associate burrobush are the most significant contributors and dominate much of the desert landscape. These two species exhibit a broad ecological amplitude that enables them to occupy vast areas of the hotter and dryer portions of both the Colorado and Mojave Deserts below 4,000 feet. Creosote bush appears to be a recent addition to the flora of the American Southwest, suggesting that many major vegetation types now recognized are new and undoubtedly in a state of flux (Johnson 1976).

Other important shrub types include blackbrush at elevations between 3,280 and 5,900 feet; shadscale with about the same elevational range but more northerly in occurrence; and sagebrush at elevations between 5,700 and 8,250 feet on the fringes of the Great Basin to the north and as enclaves to the south in the Mojave.

The following shrub species are important as forage plants and management "indicator" species for both livestock and wildlife and are found dispersed throughout the shrub types discussed above:

Allscale (Atriplex polycarpa)
Winterfat (Ceratoides lanata)
Neveda Joint fir (Ephedra nevadensis)
California buckwheat (Eriogonum fasciculatum)
Hopsage (Grayia spinosa)
Ratany (Krameria parviflora)
Menodola (Menodora spinesens)
Antelope brush (Purshia glandulosa)

* Small trees. Small tree woodlands fall into two categories: conifer stands (mostly juniper and pinyon) above 5180 feet in the desert mountains, and stands of deciduous trees (mostly paloverde, ironwood, and desert willow) of the low elevation washes. Together they occupy approximately 10 percent of the CDCA, the former being distributed mostly in the Mojave and the latter in the Colorado Desert. Although the area occupied by these woodlands is small when compared with the shrublands, their productivity is high and contributes significantly to the total biological activity of the desert region. Vegetation containing Joshua trees (Yucca brevifolia) may also be designated as woodland, but since this species usually grows well dispersed in a variety of shrub and grassland communities at mid-elevations throughout the Mojave, such a unit is not easily defined (Rowlands, 1978). In addition to having tree stature, Joshua trees also have a structure and metabolism similar to that of cacti and other succulents.

* Succulents. Succulents have a distinctive type of metabolism that is significant in understanding desert vegetation. They are sometimes considered specialized types of shrubs generally having about the same stature. However, they exhibit distribution patterns related to their unique physiology that sets them apart. All the members of the cactus and agave plant families (Cactaceae and some Agavaceae), particularly Agave, belong in this category. Members of these families dominate the vegetational composition in parts of the Colorado Desert at elevations between 3000 and 4000 feet. Of particular importance are species of prickly pear Opuntia ssp. and Yucca, along with barrel cactus (Ferocactus acanthodes) and desert agave (Agave deserti). Teddybear cholla frequently grows in almost pure stands. Mixtures of several species are more common where together they may dominate local vegetation units. They do not occupy more than a few percent of the CDCA. Succulents are also generally dispersed throughout most of the shrub communities of the desert.

* Herbs. Vegetation in which herbs may predominate in the desert are of two types, perennial grasslands and stands of annual forbs and grasses. Perennial grasslands occur in the east Mojave at elevations between 4000 and 5500 feet. They also occur at lower elevations on sand sheets covering slopes and valleys. Perennial grasses are especially prominent following years of high rainfall. The principal perennial grass species throughout most of the desert is big galleta grass. These species and these following may serve as management "indicator" species. Desert needle grass replaces big galleta grass in the western Mojave, and indian rice grass frequently becomes dominant on sandy sites. In the eastern Mojave grassland, bush muhley black gramma and galleta become important associates of big galleta grass. The grasslands have been used extensively for livestock grazing for over 100 years and have been diminished as a result. They occupy less than 5 percent of the CDCA.

Stands of annual forbs and grasses occur extensively throughout the CDCA in a remarkable on-again, off-again sequence related to frequency and intensity of precipitation. High, evenly spaced rainfall during the fall and winter commonly results in spectacular wildflower displays the following spring. Intense summer storms bring on the rapid development of an entirely different set of annual species that complete their entire life cycle in a matter of weeks. The development of both spring and summer displays fail completely in the absence of rain. Spring displays are more frequent in the southwestern Mojave. Summer displays are more characteristic of the eastern Mojave and upper Colorado portions of the CDCA. The species of winter annuals number into the hundreds, but there are just over a dozen summer annuals. Production levels from a single favorable growing season may exceed 600 lb/ac, and may be greater than that of associated perennials, but in unfavorable years the production is reduced to almost zero. This component of the vegetation is of great importance to livestock, particularly sheep, and certain species of wildlife.

Potential yearly productivity of the perennial component of the CDCA's vegetation types varies with both geographic and climatic patterns. Production is lowest in areas where precipitation is usually very low (3"/year), for example, the Salton Trough,, Death Valley, and upper Cadiz Valley, and in highly saline areas (or salt sinks). Most of these places are less than 1000 feet of elevation. Perennial production is often at or near 0 lb/ac. but may be as high as 500 lb/ac. Since rainfall generally increases with elevation, both plant species diversity and productivity also increase. Some of the most productive areas in the CDCA are above 3000 feet in potential grassland and woodland vegetation types. Here, plant productivity may be as high as 3,000 lb/ac. The latter areas have been most exploited for livestock grazing. It is important to remember that even in these areas of relatively high productivity, the unpredictability of rainfall makes the task of range management extremely difficult. Several consecutive years of drought, such as from 1974-1977, can severely restrict plant growth and therefore forage utilization at sustained yield levels. Management plans must consider this factor, which presents the need for culling herds during drought in order to maintain the range.

b-6

6 - WILDLIFE

The CDCA contains more than 100 habitats, including representatives of Great Basin, Mojave, and Sonoran Desert types. Besides these major ecosystems, the desert contains a number of transitional areas or ecotones where the desert contacts Sierra Nevadan, Central Valley, lower Californian, and Pacific floras and faunas.

These ecosystems and ecotones support approximately 640 vertebrate wildlife species, of which 42 are fishes, 16 are amphibians, 64 are reptiles, 419 are birds, and 94 are mammals. Among the bird species, 178 are resident or use the desert for breeding, 99 are wintering, and 168 are migratory, casual visitors, or accidental. There are additional exotics, some of which are pests that have been introduced from Europe, Asia, or another part of North America. Several species are endemic to (found only in) the California desert. Others have the majority (or an important portion) of their habitats there. These include four fish, four amphibians, nine reptiles, eight subspecies of birds, and 14 species and subspecies of mammals.

◉ Historic Situation. Since the 1800's, wildlife resources in the CDCA have gradually deteriorated. Several species have been extirpated, and populations of others have become seriously reduced. Species like the Jaguar, Grizzly Bear, Gray Wolf, and California Condor that occurred in the western parts of the desert have been extirpated there and are in jeopardy elsewhere. Pronghorn, once widespread in the Mojave and Colorado Deserts, were extirpated in the 1940's. The Tecopa and Shoshone Pupfishes became extinct more recently.

There have also been gains. Chukar were introduced and have spread into many desert mountain ranges; the House Sparrow and Starling -- both noxious exotics -- have become established. House Mice can be found in abandoned shacks and ghost towns, and numerous species of fishes have been introduced, generally to the detriment of native fishes.

Declines in native species are directly related to habitat quality. Some wildlife habitats have undergone radical changes and others have almost disappeared. Few are in an undisturbed condition. For example, the rich Joshua tree woodland creosote community of Antelope Valley is almost gone. So are the most diverse creosote communities of the western Mojave. Changes and losses to wildlife populations and habitats are due to numerous sources: urbanization, agriculture, livestock grazing, feral burros, highways and utility related developments, mining, ORV recreation, collecting, and hunting.

Declines in wildlife populations and habitats will continue with increasing rates of resource development. Declines can be measured in part by the growing lists of sensitive, Rare, Threatened, or Endangered species present in the CDCA.

▪ Officially Listed Species. There are two categories of officially listed species: 1) Federal Endangered and Threatened species and 2) State Endangered and Rare species. Federal law and BLM policies provide measures to protect these species and their habitats. Currently, there are six species listed as Endangered on both Federal and State lists: Mohave Chub, Desert Slender Salamander, Peregrine Falcon, Yuma Clapper Rail, Southern Bald Eagle, and Brown Pelican. Three, the Mohave Chub, Desert Slender Salamander, and Yuma Clapper Rail are, entirely desert species. The first two species occur only in the California deserts. An additional six species are officially listed as rare by the State: Black Toad, Tehachapi Slender Salamander, California Black Rail, Yellow-billed Cuckoo, Mohave Ground Squirrel, and Peninsular Bighorn Sheep. The Tehachapi

Slender Salamander has not been found within the boundaries of the CDCA, but it occurs very near the edge. Potential habitat is present within the CDCA.

■ Sensitive Species. Six species are under consideration for Federal listing, and 26 are under consideration for the BLM's sensitive species list. The six species either proposed for Federal Threatened or Endangered listing or under status review by the Office of Endangered Species are: Shoshone Cave Whip-scorpion, Mohave Rabbitbrush Longhorn Beetle, Andrews' Dune Scarab Beetle, Desert Tortoise, Coachella Valley Fringe-toed Lizard, and Flat-tailed Horned Lizard. The other species being considered for "sensitive" status are: Amargosa River Pupfish, Desert Pupfish, Nevada Speckled Dace, Inyo Mountains Salamander, San Sebastian Leopard Frog, Western Pond Turtle, Magic Gecko, Golden Eagle, Osprey, Elf Owl, Vermilion Flycatcher, Least Bell's Vireo, Summer Tanager, Inyo Brown Towhee, Kingston Mountains Chipmunk, Coachella Round-tailed Ground Squirrel, Yellow-eared Pocket Mouse, Panamint Kanagaroo Rat, Amargosa Vole, and Desert Bighorn Sheep.

Combining the Federal, State, and BLM proposed "sensitive" species lists, there are 37 species in various states of jeopardy.

■ Significant Species. This category includes species requiring management consideration for one or more reasons: declines in available habitat; depletion to the point where official listing will be considered in the near future; limited to so little geographic range that habitat encroachment would result in official listing; or having commercial, recreational, educational, and scientific values. There are 225 such species, 127 of which are invertebrates. Most are endemic to the desert. Examples are the Prairie Falcon, Chukar, and Bobcat.

■ Representative Habitats. There are over 100 different kinds of wildlife habitats in the CDCA, ranging from those typical of low elevations to those found in alpine situations. Some of the more common are saltbush and creosote bush scrub, Joshua tree and Mojave yucca communities, sagebrush, blackrush, and pinyon-juniper woodlands.

■ Unique, Rare, or Other Unusual Ecosystems. There are many different kinds of unique or unusual habitats. Several are "islands," including the nine sand dune systems, small white fir forests, and isolated pockets of chaparral in the eastern desert. Riparian and wetland habitats are another rare ecosystem group. There are prime examples in canyons along the east face of the Sierra Nevada and Inyo Mountains, in Afton Canyon, and at Ft. Piute. Riparian habitats are disappearing rapidly, not only in the desert, but throughout the United States. Closely related to the riparian types are the desert wash systems. There are several different kinds of wash habitats, including dense microphyll woodlands of ironwood, palo verde, and smoke trees, and the catclaw-black banded rabbitbrush washes. These support a rich fauna.

■ Uses of wildlife. According to national, State, and local polls, desert users rank wildlife at, or very close to, the top of desirable resources. Use of wildlife can be either consumptive or nonconsumptive. Nonconsumptive uses include observations for personal enjoyment or amateur scientific work, photography, painting, and recording of wildlife sounds. Education and research are important nonconsumptive uses (they are only rarely consumptive).

Consumptive uses include: hunting of deer, rabbits, quail, dove or chukar; personal collecting of insects, reptiles, etc.; fur trapping; and commercial collecting of reptiles. Commercial reptile collecting in the desert has been so lucrative that there has been depletion of some species. Such collecting was restricted in scope as of September 1, 1979 by the California Fish and Game Commission.

b-7

7 - CULTURAL RESOURCES / NATIVE AMERICAN VALUES

Approximately 12,000 cultural resource sites have been recorded in the CDCA. Based on systematic regional inventories and estimates, more than 100,000 may exist.

About 85 to 90 percent of the recorded sites are prehistoric, including surface scatters of worked stone, quarries, and isolated stone tools and features (apparent workshops, butchering stations, and hunting locations); villages and campsites; rock shelters; pottery locations; milling stations, trails; food cooking areas; and others. Eighteen categories of prehistoric sites of all ages have been identified. Human occupation in the desert is known to have occurred 10,000 years ago and, according to some estimates, as long as 100,000 years ago. Many of the earlier sites, long since buried, may have gone unrecognized in the inventories.

Paramount to prehistoric settlement and activities in the desert was the presence of fresh water. Habitation sites generally are found within a mile of springs, with special activity sites clustered around the habitation sites. Bodies of fresh water which were more consistent or had greater volumes became even more important. These included the Colorado and Mojave Rivers, ancient Lake Cahuilla, Owens Lake, and the permanent streams of the southern Sierra Nevada. Generally, areas with high water resource densities have higher site densities, both near the water source and at locations relatively more distant. The influences of the large water bodies are also reflected in site densities and patterning, even at a distance of many miles.

Variation in landforms corresponds well with variation in site occurrence. Prehistoric sites predominate at the interface of major landform types. Valleys generally contain more sites than mountainous areas, with the exception of the western Colorado Desert mountain transition zone. Sites are also more clustered in valleys. Older Pleistocene fans, especially those with desert pavement, serve to preserve existing sites. Certain localized landforms also seem to contain numerous prehistoric sites, such as lava flow areas, ancient lake terraces, and certain lake dune systems.

In terms of vegetation, mesquite is an important indicator of habitation sites, and is generally a high site-density area. High density mesquite habitats also have the highest ratio of occupation-to-specialized sites. Pinyon-juniper zones also contain a disproportionately high number of archaeological sites, including many campsites, especially in the Great Basin regions. The lower edge of the pinyon-juniper community exhibits a range and variety of site types not found in other mountainous areas. The presence of agave plants corresponds with a high density of specialized cooking, milling, and camp sites.

Site densities vary immensely in the California desert. Areas of Anza-Borrego State Park contain up to 60 sites per square mile. Mesquite zones in the Yuha Desert may contain over 30 sites per square mile. Active fans in areas of the Colorado Desert, on the other hand, average only 2 sites per sq. mi. Certain barren areas, upland waterless flats, and large arroyo zones may contain no sites. Generally, the Yuha/Anza-Borrego region contains the highest site density and the central Colorado Desert and northeast Mojave Desert the lowest.

Approximately 10 to 15 percent of the recorded sites are historic. Remnants of valley ranching, homesteading, and mining are widespread. Sites related to transportation and military operations are more randomly distributed than other sites. With the increase in transportation efficiency, historic activities became less dependent on the natural environment, such as water sources. Documentation must be relied on to a higher degree to discover or understand the more randomly distributed historic remnants.

About 60 properties in the CDCA are listed on or considered eligible for nomination to the National Register of Historic Places. These properties are listed in Table AE-3.

Table AE - 3

NATIONAL REGISTER OF HISTORIC PLACES IN THE CDCA

❶ LISTED PROPERTIES

Imperial County

Yuma Crossing and Associated Sites
Fages-De Anza Trail-Southern Emigrant Road

Inyo County

Big and Little Petroglyph Canyons (Naval Weapons Center)
Leadfield (Death Valley)
Skidoo (Death Valley)
Eagle Borax Works (Death Valley)
Saline Valley Salt Tram Historic Structure
Harmony Borax Works (Death Valley)
Coso Hot Springs
Death Valley Scotty Historic District (Death Valley)

Kern County

Bandit Rock (Robbers Roost)
Walker Pass
Last Chance Canyon

Los Angeles County

Little Rock Creek Dam (1 mi. south of desert)

Riverside County

Blythe Intaglios
Andreas Canyon (Rincon Village)
Tahquitz Canyon
Martinez Historical District
Barker Dam (Joshua Tree)
Desert Queen Mine (Joshua Tree)
Ryan House and Lost Horse Well
Coachella Valley Fish Traps

San Bernardino County

Harvey House Railroad Depot (Casa Del Desierto)
Piute Pass Archaeological District
Crowder Canyon Archaeological District (borders desert)
Keys Desert Queen Ranch (McHaney Ranch) (Joshua Tree)
Wall Street Mill (Joshua Tree)
Whipple Cave
Rock Cairn Complex
Calico Mountains Archaeological District
Topock Maze Archaeological Site

② PROPERTIES DETERMINED TO BE ELIGIBLE OR NOMINATED

Imperial County

Chocolate Mountains Archaeological District
Holtville Vicinity: Archaeological Sites 4-Imp-2936, 2937, 2939
Holtville Vicinity: Archaeological Sites 4-Imp-318, 322, 324, 1747, 1748, 1749, 1750
Lake Cahuilla. Lot 1
Lake Cahuilla. Lot 5
Yuha Basin Archaeological District (in process)

Inyo County

The Twenty Mule Team Borax Wagon Road (also Kern and San Bernardino counties)
Fossil Falls (in process)

Kern County

Site Ca-Ker-322 (Edwards AFB)
Site Ca-Ker-505 (Edwards AFB)

Los Angeles County

None

Riverside County

Sundesert Archaeological District A
Sundesert Archaeological District E
Sundesert Archaeological District F
Archaeological District La Quinta Evacuation Channel (covers a 240-ft. easement from LaQuinta to the White Water at Indio)
Cottonwood Oasis (Joshua Tree)
Lost Horse Mine (Joshua Tree)
Indio Hills
McCoy Springs (in process)

San Bernardino County

Steam Well Petroglyph Archaeological District
Trona Pinnacles Railroad Camp
Squaw Spring Well Archaeological District
Twentynine Palms Oasis (Joshua Tree)
Cow Cove Archaeological District (in process)
Aikens Wash Archaeological District (in process)
Rodman Mountains Archaeological District (in process)
Bedrock Springs Archaeological District (in process)
Old Wells Archaeological District (in process)
Golden Valley Archaeological District (in process)
CA-SBr-187 (Susugina) (in process)
Goldstone Mining District (in process)
Needles Vicinity District

Native American traditional areas are distributed throughout the CDCA. The majority of these areas are large tracts of hunting and collection territories traditionally used by one or more Native American groups. Of the 51 tracts of land identified in the DPS desert inventory, the majority possesses a special religious and/or ritual importance to Native Americans.

A second category of Native American traditional areas includes ritual sites and specific natural features, such as localities of ritual healing, divination, initiation, and mortuary practice.

All hot springs and many other water sources have ritual value. Many natural promontories and mountain peaks appear in native myth as areas of particular religious value. Some archaeological sites, including rock art localities, mortuary sites, and shrines, continue to be sacred to many Native Americans.

Areas of religious and mythic importance are distributed throughout the CDCA. Many areas are extremely sensitive; however, many will not be specifically identified in order to preserve their integrity.

b-8

8- WILDERNESS

Approximately 43 percent of the BLM-administered lands in the CDCA (5.7 million acres) meets the minimum wilderness criteria identified in the Wilderness Act of 1964. Pursuant to the Federal Land Policy and Management Act of 1976, these areas will be studied by BLM to determine suitability for wilderness designation by Congress. In addition to BLM wilderness study areas, about 2.5 million acres of State or federally designated or proposed wilderness exist in the CDCA.

With Congressional designation of wilderness areas and with the development of additional facilities, camping and primitive forms of recreation are expected to increase significantly. Prevailing public sentiment -- national, State, and regional -- is overwhelmingly protective of natural and scenic values; therefore, permitted land uses will probably become more strongly conservation oriented in the future.

b-9

9- VISUAL QUALITY

Landscape character is most influenced by a lack of water and low rainfalls. This situation results in the interesting plant forms, white dry lake beds, dominance of the landform features, and even the characteristic crystal clear air which still enhances views of landscapes in some parts of the desert.

10 - RECREATION

Within the CDCA, 28 percent of all recreation and 3 percent of expenditures for recreation take place on BLM-administered lands. Most recreation occurs on weekends and holidays. Visitors spend an average of seven days in the desert each year. Most persons engage in more than one recreational activity during their visit. Virtually all forms of recreation involve a vehicle, either for access to recreation sites or, simply, for the pleasure of operating the vehicle.

Two patterns of recreational use have emerged from recreation studies in the California desert -- concentrated use and dispersed use. Concentrated use is site-specific, involves greater user densities, is generally motorized, and is predictable. Such users tend to be frequent desert visitors, accounting for about 15 percent of total desert use. ORV use and organized events on motorcycles, dunebuggies, and four-wheel drive vehicles occur thorughout the CDCA; Dove Springs, Jawbone Canyon, Johnson Valley, Algodones (Imperial) Dunes, and the Mecca Hills are popular areas. Vehicle enthusiasts are attracted to the desert's open spaces which provide opportunities not generally available elsewhere in the region. A system of "open" areas for unrestricted vehicular play is available, comprising 5 percent of all desert lands. Five percent of all lands are closed to vehicular entry; all other BLM-administered lands are open to vehicular use on roads and trails.

Dispersed use is usually nonmotorized, except sightseeing and pleasure driving. It is more casual and less predictable, and such users tend to be less frequent desert visitors, although they account for about 85 percent of total desert recreation.

The recreation emphasis in this category is on the environment, and there is a close correlation between environmental quality and the quality of the recreational experience. The environment is viewed as important for its own intrinsic values. Activities such as sightseeing, driving on roads for pleasure, camping, hiking, backpacking, painting, photography, education and research, nature study, birdwatching, picnicking, and horseback riding comprise the majority of primary recreational use on public lands. These traditional types of recreation have long been popular in Afton Canyon, the Granite Mountains, Corn Springs, and Fossil Canyon, but they are often widely dispersed wherever there are scenic, archaeological, wildlife, or botanical values. Scientific research and education, while not recreation in a strict sense, account for a quarter of a million user days annually for study of the natural and cultural values of the desert.

● Vehicle-oriented Activities. The recreational emphasis for these activities is on use of a vehicle as an end in itself. The environment is viewed as important primarily as a place to use vehicles.

Open space is a basic requirement for activities such as soaring, target shooting, hang gliding, model rocket and airplane flying, and sand sailing. The desert provides outstanding opportunities for these activities in its dry lake beds, bajadas, and mountains. Approximately 3 percent of the CDCA recreationists participate primarily in these activities.

The desert is a rich source of material for rockhounds and hobby prospectors. It also provides many opportunities for hunting such game as chukar, quail, dove, and rabbit. (These activities make up about 5 percent of total primary recreational use on BLM-administered lands in the CDCA.) Collection without permit of Native American rock art, arrowheads, or other prehistoric or historic artifacts is forbidden on all public lands.

● Organized Group Use and Events. Some 400 recreational organizations in southern California use the CDCA. Seventy-five percent of these are affiliated with parent organizations, and 103,000 members belong to the 400 satellite groups. About half (186) of organized user groups visit the desert less than 10 times annually. By far the greatest number of trips involve travel of from two to four hours. Activity by rockhounds and a variety of vehicle-oriented groups constitutes over half of all organized use. The most well-known of the organized events are the 80 to 100 annual competitive motorcycle races which currently attract about 30,000 entrants.

Organized (competitive and noncompetitive) events have shown a decline in number of entrants since 1974, and this trend is expected to continue in the short term and then level off at somewhat less than the current 30,000 entrants.

● Visitor Management Facilities. The BLM currently operates seven developed campgrounds and one campsite in the CDCA. One visitor way station in Barstow provides information on desert resources, values, and uses. Two other such facilities are planned, one of which is presently in the construction phase. Other visitor services are provided on a sporadic and site-specific basis. The level of services provided in campgrounds includes information on, and appropriate uses of: the site and area, water, pit toilets, tables, ramadas, and trash facilities. Fencing of hazardous or sensitive areas is sometimes provided to protect users and resources. The only existing developed trail is the Pacific Crest National Scenic Trail which traverses the CDCA in two areas.

● Trends. Recreation use of BLM-administered lands in the CDCA has increased 343 percent in the last 10 years to 15.3 million visitor-use days in 1977. Due to increasing public "discovery" of the desert, and because other public recreational opportunities in southern California are reaching their carrying capacities, future recreational use of BLM-administered lands in the CDCA is expected to increase moderately, with 19.4 million visitors expected in the year 2000.

b-11

11 - DOMESTIC LIVESTOCK GRAZING

Currently and continuing under "no action", grazing occurs on 4.5 million acres in 54 grazing allotments are being leased to cattle and sheep interests. Approximately 60,000 sheep (40,000 AUMs) and 10,000 cattle (120,000 AUMs) obtain all or part of their sustenance from the California desert. Sheep grazing is generally intermittent. Cattle grazing may be continuous or intermittent depending on the locality and type of ranching operation.

Grazing use is dictated in large measure by the climatic patterns within the CDCA as well as the cultural and settlement characteristics that have developed. The amount, quality, and timing of forage production is controlled primarily by the amount and season of precipitation. Sheep grazing occurs mostly in the low-elevation western portions of the Mojave Desert where fall and winter precipitation produces a rich growth of winter and spring annuals on a moderately regular basis, i.e., in about 7 out of every 10 years. Sheep grazing may not occur at all during dry years. Details on present grazing levels and range condition and trends are shown on Table G-1, section II-C-7.

Cattle grazing generally occurs in areas with higher elevations and higher precipitation. Perennial plant cover provides a major part of the forage supply. The pattern of use is seasonal in the northern Mojave, but there is year-round use in the southwest and eastern Mojave. Seasonal use on an annual forage availability basis is also practiced. In contrast with sheep operators, cattle ranchers frequently are permanent residents of long standing.

Through the years, the amount of livestock grazing in the CDCA has declined in both acreage and intensity. Lands formerly grazed on the western edge of the desert have passed into private ownership and are no longer available. In recent years, recreational use, particularly by off-road vehicles (ORVs), has further impacted the range on the western fringe, resulting in additional livestock management problems as well as decreasing forage production potential. In the early 1970s, wild horses and burros under protection of Federal law began a rapid expansion both in numbers and areas occupied and are now offering severe competition for forage to many livestock operations.

b-12

12 - WILD HORSES AND BURROS

Under the protection of Federal law, populations of burros in the CDCA are increasing at between 10 and 20 percent per year. Burros have nearly doubled their numbers since 1976. Wild horses are following a similar pattern, but are less abundant. An estimated 8,800 burros and 750 horses live in the CDCA. Thirty-two wild burro and 7 wild horse management units are recognized. High concentrations of burros of critical importance occur in the northern and eastern Mojave desert and in the Colorado desert adjacent to the Colorado River. They are extending their range into habitats not occupied formerly. Range expansions have been particularly large during the past three years due to exceptional forage production.

Populations in many of the herd management areas are so large they are severely over using the vegetation, particularly around water. Bighorn Sheep, Mule Deer, and livestock are being severely impacted. Burros and livestock are often in direct competiton. Approximately one million acres of wild horse and burro range occur within areas that have been historically used for livestock grazing. Details on the current status of wild horses and burros can be found on Table G-3.

b-13

13 - SOCIOECONOMIC

* Population. Approximately 512,000 people (2 percent of California's population) live in the CDCA. The greatest concentrations of population are in the vicinity of Lancaster and Mojave, and around Palm Springs and Indio. Lesser concentrations occur at Barstow, Victorville, and in the Imperial Valley. The population of the desert is expected to continue to increase at a rate faster than that of the State of California. Many of the desert communities have substantially higher median ages than the State because they are principally retirement communities. Tables AE-4 and 5 present CDCA population by county and in population centers, respectively.

TABLE AE-4

CDCA POPULATION BY COUNTY

	1960	1970	1976	1980	1990	2000
Imperial County	72,105	74,492	83,800	94,100	113,100	129,000
Desert portion of						
Inyo	1,570	1,844	2,850	2,950	3,200	3,600
Kern	36,679	44,988	48,980	50,800	55,400	60,000
Los Angeles	63,158	76,153	85,844	89,300	144,000	198,000
Riverside	69,075	103,396	124,397	141,400	183,500	218,200
San Bernardino	91,785	116,334	125,441	132,115	146,030	159,120
San Diego	780	1,087	1,400	1,600	2,200	3,000
Total CDCA	335,152	418,294	472,712	512,265	647,430	770,920

Source: SRI International.

Table AE - 5

POPULATION CENTERS IN THE CDCA - 1976

Imperial County	
Brawley	14,070
Calexico	13,297
El Centro	21,748
Kern County	
Ridgecrest	13,587
Los Angeles County	
Lancaster	43,981
Palmdale	10,751
Riverside County	
Indio	19,584
Palm Desert	11,238
Palm Springs	29,497
San Bernardino County	
Apple Valley *	11,463
Barstow	16,906
Victorville	12,497

Source: SRI International

* 1975

* Industries and Employment. The two largest employment sectors in the desert are services and trade. Compared to the State, the CDCA is highly dependent on employment in the services, trade, and agriculture sectors. Manufacturing is the largest employing sector in the State, but it is only the fifth largest sector in the desert.

Retail trade and services account for 75 to 80 percent of all taxable transactions, compared to a 67 percent statewide average. Recreational travel and tourism contribute significantly. Visitors to the desert numbered about 15 million in 1977. They spent almost $350 million and supported 10,000 jobs with an $80 million payroll. About 3 percent of this total can be attributed to recreationists on BLM lands. The greatest portion is spent by visitors to desert resorts and national monuments.

Minerals produced in the CDCA are valued at about 50 percent of California's total production, exclusive of oil and gas production. There is no oil and gas production in the CDCA. In 1974 the minerals produced in the CDCA were worth an estimated $445 million. The desert produces 100 percent of the nation's boron, 97 percent of its rare earth minerals, 10 percent of its crude gypsum, 15 percent of its talc, and 5 percent of its iron. Other important minerals include cement, sand and gravel, limestone, sodium and lithium salts, and some gold, silver, lead, and zinc. Almost all of this production comes from private lands.

Relative to the rest of California, CDCA employment is very dependent upon the minerals industry. Mineral extraction alone employs about 4,400 people. In addition, the industry employs many people who are counted in the transportation, manufacturing, and construction sectors.

The primary significance of the BLM-administered managed lands in terms of present employment is that they are the place where independent mineral prospectors operate. When a valuable deposit of most minerals is found, the site is transferred to private ownership. Throughout the desert, numerous unpatented mining claims exist and occasionally produce, but the production is an insignificant portion of the desert's total.

Energy and utilities employment in the CDCA is included in the 14,000 employee sector covering transportation, communication, and utilities. Employment in this sector is probably dominated by its transportation component. Present electrical energy production totals 537 MW. Geothermal energy production capability is being developed in the Imperial Valley, but it is not yet past the technological development phase. Most energy and utilities employment within the CDCA is connected with the maintenance of existing electrical and natural gas transmission facilities connecting southern California metropolitan areas with energy sources to the north and east of the CDCA. Table AE-6 describes employment by sector in the CDCA.

TABLE AE-6

ESTIMATED PERCENTAGE EMPLOYMENT BY SECTOR - 1976

Sector	CDCA %	Southern California %
Agriculture, forestry and fisheries	8.2	4.7
Mining	2.8	0.4
Contract Construction	6.0	6.3
Manufacturing	8.7	24.0
Transportation, communications and Utilities	9.0	6.8
Wholesale and Retail Trade	20.8	10.4
Finance, insurance and real estate	3.8	5.0
Services	25.0	23.0
Government	9.2	10.9
Industry not reported	6.5	4.4

* Social Values. A poll of desert residents attempted to discover the natural resource related social values of people living in the CDCA. The most notable results of the study were as follows:

- Desert residents tend to be more interested in development and active use of the desert than do outside residents, statewide or nationwide. However, even among desert residents there is widespread sentiment for conservation.
- Residents of the eastern half of the desert stand out as being the most supportive of such things as motorcycling and places for ORV use, and the most opposed to controls over use of the desert.
- Residents of Twentynine Palms, Palm Springs, and Anza-Borrego Desert State Park are the most conservation-minded, the oldest, the least apt to be born in the desert, and the most apt to believe that resort users are significant contributors to the desert economy.
- Residents of Imperial County, Indio, and the Salton Sea area are notable for a relatively high rate of residents born in the desert, for the importance they perceive farming to have, and for their relatively low level of familiarity with BLM.
- The residents of the area composed of Antelope Valley, Ridgecrest, Barstow, and Victorville tend to fall in the intermediate levels on the issues outlined above.

The life styles of livestock ranchers and small miners are intimately entwined with use of the BLM-administered lands in the CDCA. Both groups of residents are very concerned about past and future BLM decisions restricting their use of the desert. These feelings are very intense because they sense a potential for the elimination of not only their life styles, but also their livelihoods.

Other desert residents have life styles which include nature observation, ORV play, rockhounding, camping, and sightseeing. These people generally sense less threat to their life styles because their livelihood is not involved. Their concerns center primarily on their continued opportunity to pursue their leisure-time activities.

~ Outside the CDCA

* Population of Visitors. Visitors to the CDCA come primarily from California. Out-of-state visitors constitute about 15 percent of the total. Thirty-five percent of California's population visited the California desert during 1977. This includes 51 percent of the population of southern California and 18 percent of all northern Californians. Approximately 15 percent of the 14.4 million annual visitors visit BLM lands.

In most ways visitors do not differ from the overall State population. The areas in which they differ are income and education. Desert visitors tend to be well educated and have higher incomes than the State average.

Table AE - 7

ESTIMATED VISITATION TO CDCA

- 1977

	People (000,000)
Total Visitation	14.4
Visitors for Recreation Purposes	7.7
Visitors to BLM Lands	2.0-2.5
Visitors to desert communities	9.0
Visitors to National, State and, County Parks	3.3

Sources: SRI, Demographic and Economic Trends in the California Desert, May 1978.

BLM, Summary of Recreational Use on Public Lands in California's Desert Conservation Area, preliminary copy dated October 25, 1979.

* Affected Industries and Employment. It has been estimated that residents of Los Angeles, San Diego, Orange, Riverside, and San Bernardino counties annually spend $330.4 million on ORV recreation (AMA, 1979). Most of this money is spent in the metropolitan area, but the level of spending is related to the amount of ORV activity in the CDCA which serves as the major use area.

In addition to supporting off-road motorcycle sales, ORV use in the CDCA supports four-wheel drive and dune buggy industries located primarily in the southern California metropolitan areas. Although four-wheel drive sales have increased sharply, it appears that these sales are much less closely tied to off-road activity in the CDCA than motorcycles, because four-wheel drive vehicles are a small proportion of the off-road activity. Dune buggy construction and operation is significantly tied to use in the CDCA, but it is thought to be a much smaller dollar amount than motorcycles. Use of dune buggies in the CDCA, particularly in Imperial County, is thought to be a major factor in sales.

Generating plants within the CDCA meet 1.8 percent of California's demand. Power transmission lines carrying over 91 KV use approximately 3,500 miles of corridors in the CDCA. These transmission lines connect the electricity consumers in the southern California metropolitan area to power sources outside of the State. Currently about 25 percent of southern California's electrical power crosses the CDCA.

Petroleum and fuel pipelines use 1,200 miles of corridors in the CDCA. Most of these carry natural gas from gas fields in New Mexico and Texas to consumers in metropolitan southern California.

All of southern California's major water conveyance systems cross the Desert. These systems carry water from the Colorado River, Owens and Mono Basins, and northern California. They serve agriculture in the desert in Imperial County and the Coachella Valley. The residential and industrial users are in the metropolitan areas.

* Affected Social Values. While sightseeing is the predominant recreation use, the people who visit the desert most repeatedly are ORV users. The opportunity to pursue this interest is more or less restricted to the desert.

Another life style directly tied to use of the desert is rockhounding. Many of these people live outside the CDCA but visit it frequently. This life style relies on opportunities for acquisition, freedom of movement, and a sense of "getting away from it all."

A third nonresident life style relating to use of the public lands is the "snowbird." This group is composed of people, usually retired, who move into the desert during the winter months and usually go north in the summer. They most often live in motor homes or camper trailers. Opportunities to visit warm, scenic, and secluded areas by vehicle and for places to camp are important to them. These people stay longer than other groups.

The other general category of nonresident life style related to the desert is that of nature observers and researchers (both professional and nonprofessional). Their interest in nature is usually specifically tied to desert environments. The opportunity to observe undisturbed desert areas is critical to their life style. Many of these people are associated with educational insitutions in the metropolitan areas.

The life styles described here are not mutually exclusive; many more could be described. These were selected because the people involved use BLM-administered lands in the desert.

According to a 1977 Gallup Poll, 56 percent of the American public expressed some degree of familiarity or interest in the California desert. Of those interviewed, 41 percent were interested enough to offer their responses to further questions. Within this latter group a majority favored the type of land use that would preserve the natural environment.

A poll of California residents in 1977 found that one-third of those interviewed had visited the desert in the last year for recreational activities. It was reported that 9 percent spent one or more days in desert areas administered by BLM.

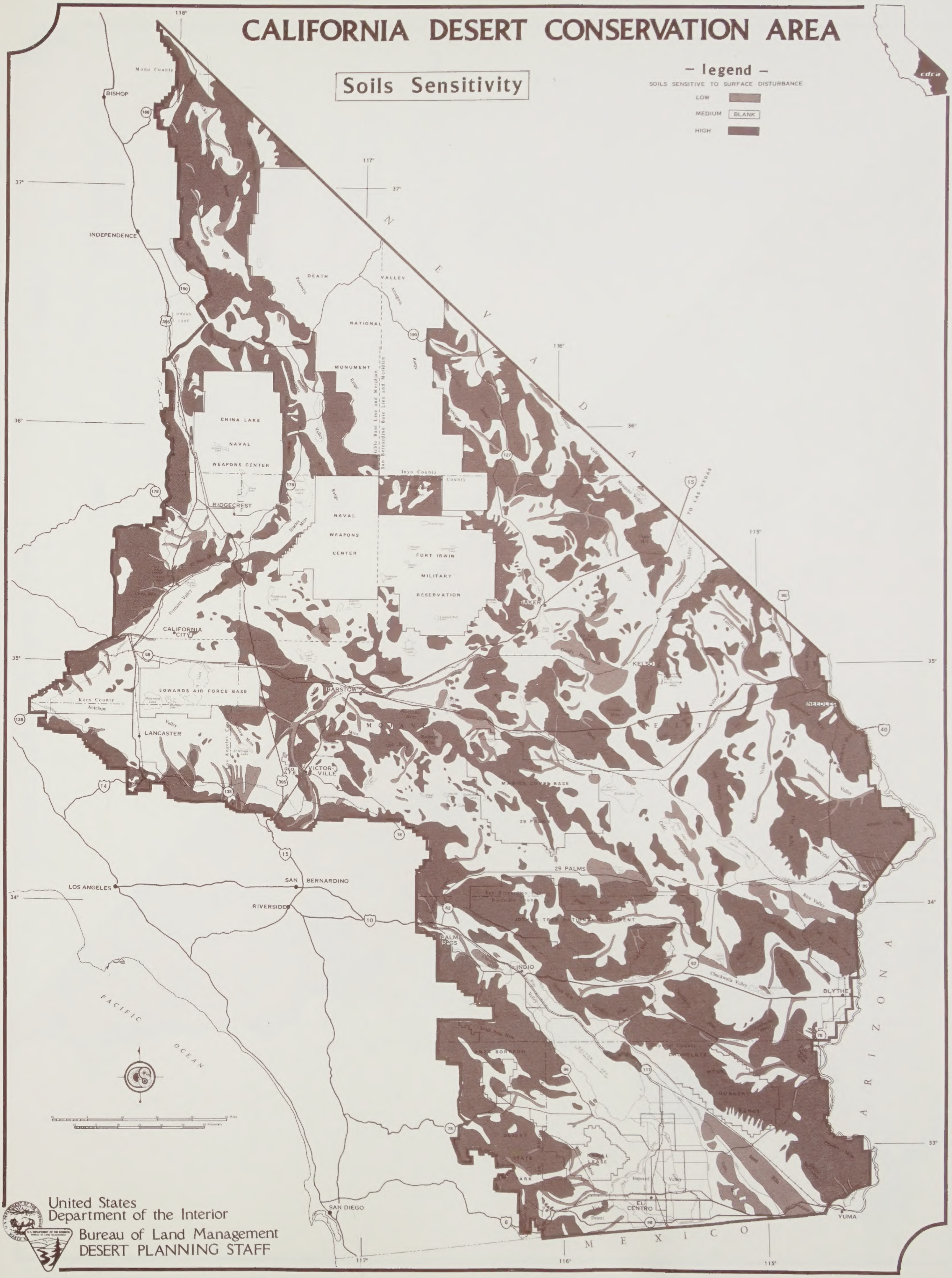
CALIFORNIA DESERT CONSERVATION AREA

Soils Sensitivity

– legend –

SOILS SENSITIVE TO SURFACE DISTURBANCE

LOW	▨
MEDIUM	BLANK
HIGH	■


cdca
Mono County
BISHOP
INDEPENDENCE
DEATH VALLEY NATIONAL MONUMENT
N E V A D A
CHINA LAKE NAVAL WEAPONS CENTER
RIDGECREST
NAVAL WEAPONS CENTER
FORT IRWIN MILITARY RESERVATION
Inyo County
BAKER
TO LAS VEGAS
KELSO
CALIFORNIA CITY
EDWARDS AIR FORCE BASE
Kern County
LANCASTER
BARSTOW
VICTORVILLE
GEO. AFB
M O J A V E   D E S E R T
NEEDLES
MARINE CORPS BASE
29 PALMS
JOSHUA TREE NATIONAL MONUMENT
SAN BERNARDINO
LOS ANGELES
RIVERSIDE
PALM SPGS
INDIO
BLYTHE
Chuckwalla Valley
CHOCOLATE MTNS
GUNNERY RANGE
ANZA BORREGO DESERT STATE PARK
Imperial Valley
EL CENTRO
YUMA
A R I Z O N A
M E X I C O
SAN DIEGO
P A C I F I C   O C E A N
118°
117°
116°
115°
37°
36°
35°
34°
33°
Miles
Kilometers

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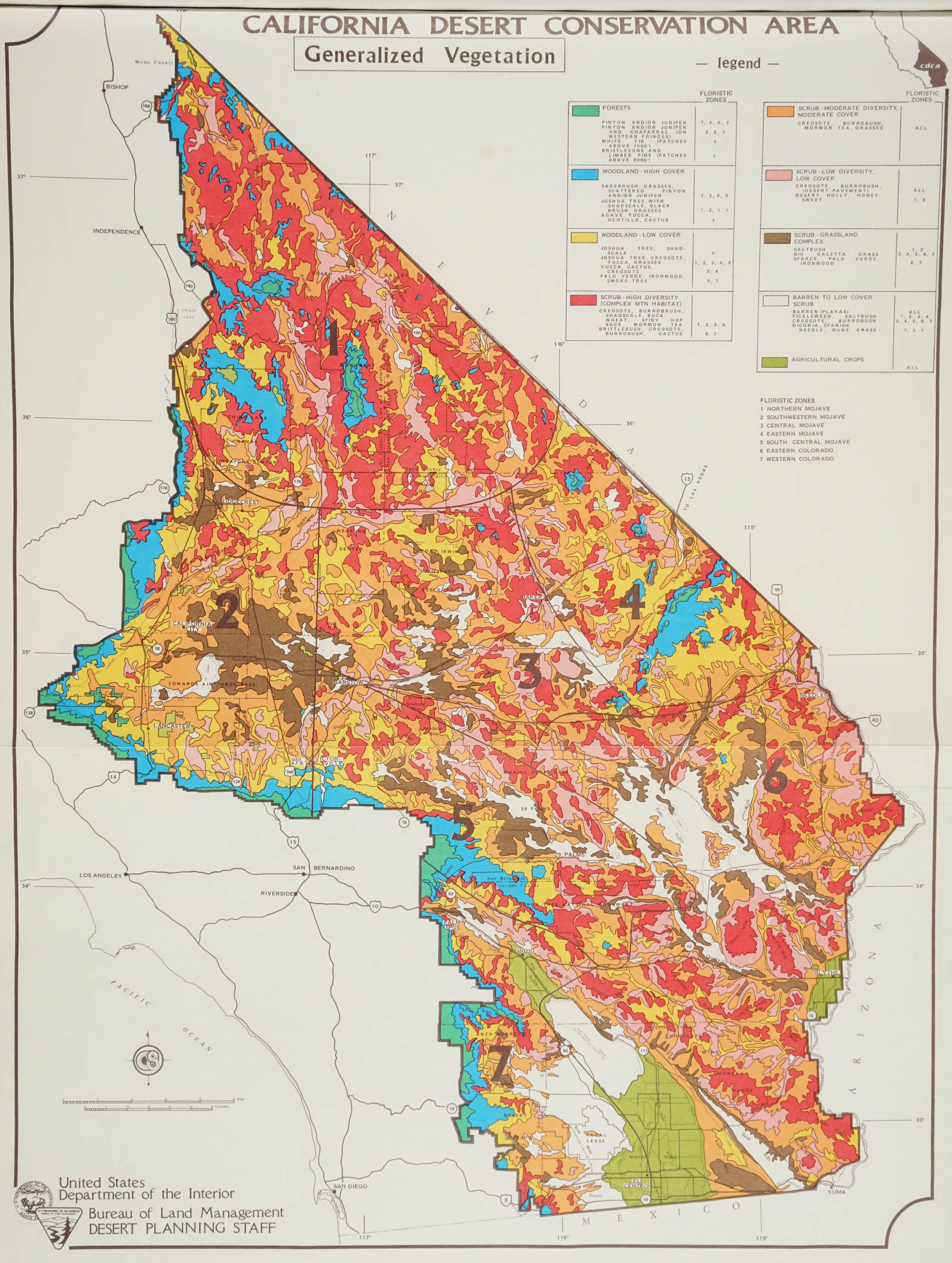
CALIFORNIA DESERT CONSERVATION AREA

Generalized Vegetation


cdca
BISHOP
Mono County
INDEPENDENCE
OWENS LAKE
NEVADA
TO LAS VEGAS
RIDGECREST
CHINA LAKE
NAVAL WEAPONS CENTER
FORT IRWIN MILITARY RESERVATION
CALIFORNIA CITY
EDWARDS AIR FORCE BASE
LANCASTER
BARSTOW
GEO A.F.B.
VICTORVILLE
BAKER
KELSO
NEEDLES
29 PALMS
SAN BERNARDINO
LOS ANGELES
RIVERSIDE
PALM SPGS
INDIO
BLYTHE
ANZA BORREGO
EL CENTRO
Imperial Valley
SAN DIEGO
YUMA
PACIFIC OCEAN
MEXICO
ARIZONA
1
2
3
4
5
6
7
37°
36°
35°
34°
33°
118°
117°
116°
115°
Miles
Kilometers

— legend —

	FLORISTIC ZONES
🟩 FORESTS	
PINYON AND/OR JUNIPER	1, 2, 5, 7
PINYON AND/OR JUNIPER AND CHAPARRAL (ON WESTERN FRINGES)	2, 5, 7
WHITE FIR (PATCHES ABOVE 7500')	4
BRISTLECONE AND LIMBER PINE (PATCHES ABOVE 8000')	1
🟦 WOODLAND - HIGH COVER	
SAGEBRUSH, GRASSES, SCATTERED PINYON AND/OR JUNIPER	1, 2, 4, 5
JOSHUA TREE WITH SHADSCALE, BLACK-BRUSH, GRASSES	1, 2, 4, 5
AGAVE, YUCCA, OCOTILLO, CACTUS	7
🟨 WOODLAND - LOW COVER	
JOSHUA TREE, SHADSCALE	1
JOSHUA TREE, CREOSOTE, YUCCA, GRASSES	1, 2, 3, 4, 5
YUCCA, CACTUS, CREOSOTE	3, 4
PALO VERDE, IRONWOOD, SMOKE TREE	6, 7
🟥 SCRUB - HIGH DIVERSITY (COMPLEX MTN HABITAT)	
CREOSOTE, BURROBRUSH, SHADSCALE, BUCKWHEAT, SPINY HOP SAGE, MORMON TEA	1, 2, 3, 4
BRITTLEBUSH, CREOSOTE, BURROBUSH, CACTUS	6, 7
🟧 SCRUB - MODERATE DIVERSITY, MODERATE COVER	
CREOSOTE, BURROBUSH, MORMON TEA, GRASSES	ALL
SCRUB - LOW DIVERSITY, LOW COVER	
CREOSOTE, BURROBUSH, (DESERT PAVEMENT)	ALL
DESERT HOLLY, HONEYSWEET	1, 3
🟫 SCRUB - GRASSLAND COMPLEX	
SALTBUSH	1, 2
BIG GALETTA GRASS	3, 4, 5, 6, 7
SPARCE PALO VERDE, IRONWOOD	6, 7
⬜ BARREN TO LOW COVER SCRUB	
BARREN (PLAYAS)	ALL
PICKLEWEED, SALTBUSH	1, 2, 3, 4
CREOSOTE, BURROBUSH	3, 4, 5, 6, 7
DICORIA, SPANISH NEEDLE, DUNE GRASS	1, 3 - 7
🟩 AGRICULTURAL CROPS	ALL

FLORISTIC ZONES
1 NORTHERN MOJAVE
2 SOUTHWESTERN MOJAVE
3 CENTRAL MOJAVE
4 EASTERN MOJAVE
5 SOUTH CENTRAL MOJAVE
6 EASTERN COLORADO
7 WESTERN COLORADO

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Bureau of Land Management
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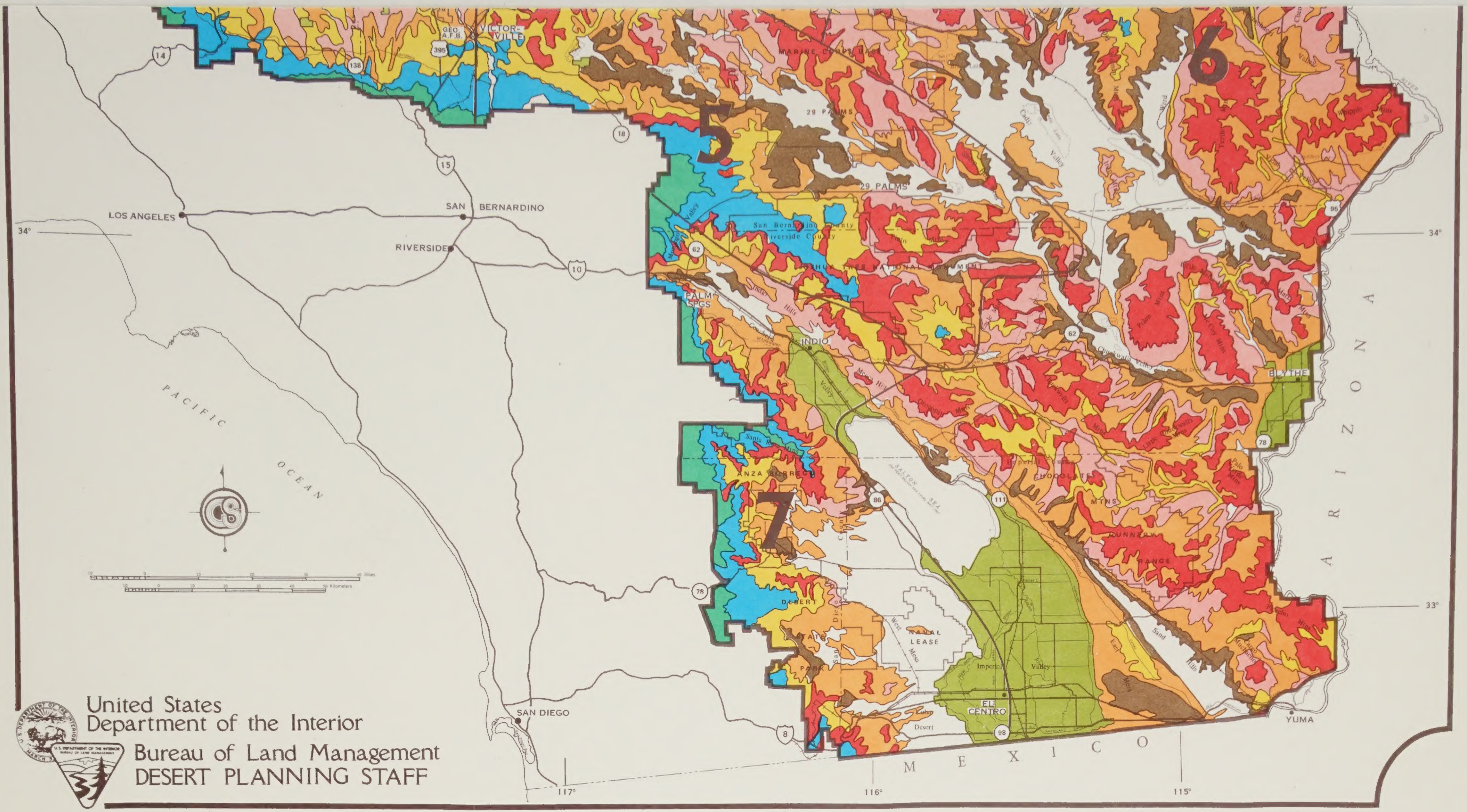

5
6
7
VICTORVILLE
GEO. A.F.B.
29 PALMS
MARINE CORPS BASE
LOS ANGELES
SAN BERNARDINO
RIVERSIDE
PALM SPGS
INDIO
BLYTHE
EL CENTRO
SAN DIEGO
YUMA
San Bernardino County
Riverside County
JOSHUA TREE NATIONAL MONUMENT
ANZA BORREGO DESERT STATE PARK
SALTON SEA
NAVAL LEASE
CHOCOLATE MTNS
GUNNERY RANGE
Imperial Valley
East Mesa
West Mesa
Sand Hills
Chuckwalla Valley
Cadiz Valley
PACIFIC OCEAN
ARIZONA
MEXICO
14
138
395
15
18
10
62
86
111
78
98
8
95
34°
33°
117°
116°
115°
Miles
Kilometers

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part IV-c

Environmental Consequences

Environmental Consequences

The following section compares the environmental consequences of the alternatives and provides a summary of the significant impacts which would result from implementation of each alternative. It is presented in two parts:

❶ Cumulative impacts of allocations under each plan alternative organized by each impacted resource category.

❷ Impacts of each plan element by alternatives on all resources affected, with site-specific assessment of such impacts where possible.

Cumulative Impacts

C-1

Table EC - 1

CUMULATIVE IMPACTS OF THE ALTERNATIVES

Resource	No Action Alternative	Protection Alternative	Balanced Alternative	Use Alternative
Air	◑	◑	◑	●
Water	◑	○	○	◑
Soil	●	◑	◑	●
Vegetation	◑	◑	◑	●
Wildlife	●	○	◑	●
Cultural	●	⦶	⦶	●
Native American	●	⦶	⦶	○
Wilderness	●	⊕	◑	●
Visual	◑	⊕	⦶	●
General Recreation	◑	◑	⦶	◑
Motorized Vehicle	○	●	○	⊕
Grazing	○	◑/● a	◑	○
Burros	○	◑	◑	◑
Social Factors	○	◑	○	○
Economic Factors	○	◑	○	○

a) No grazing whatsoever

• LEGEND •

○ No significant impact
⦶ Positive impact
⊕ Highly positive impact
◑ Negative Impact
● Highly negative impact

Note: The No Action Alternative assumes present BLM management, actual livestock use, and that wild horse and burro numbers will remain unchanged over the next 20 years (see page 31 of the plan for a more complete explanation).

The Protection, Balanced, and Use Alternative columns indicate impacts anticipated in the next 20 years when an alternative is compared against existing 1980 conditions.

CUMULATIVE IMPACTS OF THE ALTERNATIVES

When the impacts from all plan elements and ACECs are combined, the cumulative impacts of the plan alternatives can be compared. In this section, the sum total of significant impacts is indicated: a summary chart provides an overall comparison of the cumulative impacts of the alternatives; a series of brief narratives and tables describe, in more detail, the significant impacts on each resource.

Air Quality

Air quality would be significantly impacted from a variety of activities such as power plants, mining, and motorized vehicle use. The power plants and mining would increase the amounts of hydrogen sulfide, sulfur dioxide, nitrus oxide, and particulates in the air. Motorized vehicles would increase particulates and some gaseous pollutants.

Because of a lack of site-specific information on ambient pollutant concentrations, meteorological factors, and source configurations. The impacts of the above activities cannot be quantified. However, a decline in air quality would be expected in all alternatives. While differences between alternatives cannot be predicted, the potential for impact is closely related to the amount of land available for impacting activities. Thus, there would be a descending order of potential impact in the Use, No Action, Balanced, and Protection Alternatives. While No Action is included in this comparison, it relies to a great extent on ad hoc administrative controls, making the assessment of possible impacts even more difficult to determine.

Water Resources

The single most significant potential impact to water resources is the operation of power generation facilities. While imported water would be a viable source, desert surface water supplies are not dependable enough to provide supplies for power plant cooling water. Thus, power production impacts to water resources would primarily be through pumping from groundwater basins.

Potential impacts to groundwater resources were evaluated by comparing potential Power Plant Siting Regions with known groundwater basins and areas of groundwater storage (California DWR, 1975). These water resources were categorized as either being used or as being extensively developed. The numbers of basins in each category by plan alternative are shown in the following table (see Environmental Consequences Section for basin locations):

Table EC-2

SIGNIFICANT IMPACTS ON WATER RESOURCES BY ALTERNATIVE

Key Issues	No Action	Protection	Balanced	Use
Number of basins with existing use that may be impacted	*	5	13	16
Number of basins with extensive development that may be impacted	*	3	7	10

*No potential power plant siting regions are identified.

Soils

The most significant soil impacts would be the effects of ORV activity, new energy production sites. utility corridors, and mining. The soil impacts from livestock grazing and burros tend to occur as high impacts in localized areas (holding areas, watering sites, etc.). Impacts on soil from the other elements tend to be minor.

Potential impacts of the Use and No Action Alternatives are highly negative. The Use Alternative has approximately 1,140,000 acres of susceptible soils in ORV open areas, and the No Action Alternative has approximately 500,000 acres of susceptible soils in ORV open areas. Also, the Use Alternative has 875,000 acres of susceptible soils within proposed new utility corridors.

Potential impacts of the Balanced and Protection Alternatives are also negative, but not to the extent indicated above. The Balanced Alternative has approximately 260,000 acres and the Protection Alternative has approximately 70,000 acres of susceptible soils in ORV open areas. Also, the Balanced Alternative has approximately 500,000 acres and the Protection Alternative approximately 225,000 acres of susceptible soils within proposed new utility corridors.

These impact ratings are relative and it is impossible to predict with any accuracy total acreages of soil within the areas susceptible to severe compaction or significant soil losses through erosion.

Potential impacts on the use of arable lands are caused by restrictions on agriculture provided in the Multiple Use Class Guidelines. The Protection Alternative, which is the most restrictive for agriculture, would make approximately 10 percent of the arable lands within public lands available for agriculture. The No Action, Balanced, and Use Alternatives have 25, 50, and 70 percent, respectively, of arable lands within public lands available for agriculture. Approximately 50 percent of the 3 million acres of arable lands occur on public lands.

Vegetation

Unique plant assemblages (UPA) and Rare, Threatened, or Endangered plant species would be impacted by a variety of uses, including motorized vehicles, burros, mineral and energy development, land tenure, recreational activities, and livestock grazing. The extent and degree of impacts would be extremely variable, ranging from 1 to 100 percent of the total area of potential impact. For many Rare, Threatened, or Endangered species, the extent and degree of impacts is undetermined.

Impacts can be classified as to their intensity and duration based on the type of use. Impacts from mineral and energy development tend to be localized, of high intensity, and of short duration. Other impacts may be of a low intensity, long in duration, and cause a slow but progressive degradation of the ecosystem. Motorized vehicle use and burros, if not controlled, can cause both types of impacts. These uses often have a general, widespread low-intensity impact, but may also exhibit very high-intensity impacts over a short duration. For example, burros can cause severe environmental damage around waterholes, and motorized vehicles can likewise severely disrupt vegetation at camping spots, ORV pit areas, and hill climbs. Thus, when comparing alternatives, these types of impacts should be considered.

The No Action Alternative could impact up to 118 unique plant assemblages. Thirty-nine UPAs are located within 54 livestock grazing allotments; however, impacts on these UPAs appear low. Approximately 20,000 acres of one UPA, the Ancient Creosote Bush Rings, are currently being impacted by ORV use. This amounts to about 15 percent of the UPA. Impacts from mineral and energy developments are unknown.

Rare, Threatened, or Endangered species are also potentially impacted by livestock grazing, with 49 such species located in 54 allotments. No evidence exists that indicates that livestock use is severely reducing populations of listed species. However, observations have shown that burros affect Rare, Threatened, or Endangered plants by reducing reproduction potential (Jack Fisher pers. comm). ORV use has also reduced some populations of Rare, Threatened, or Endangered species, but no evidence exists showing reductions severe enough to jeopardize the continued existence of a species.

The differences in potential impacts on unique plant assemblages in the Protection and Balanced Alternatives stem primarily from the number of UPAs in potential mining locations and electrical generating sites. These differences are also seen with respect to Rare, Threatened, or Endangered plants. These are localized, high-intensity, short-duration impacts. Comparisons between the Protection and Balanced Alternatives and the No Action Alternative indicate that the No Action Alternative could have a higher negative impact than the other two. When comparisons are made including the Use Alternative, ORV use and mineral and energy development could impact 148 known populations of Rare, Threatened, or Endangered species and 54 UPAs. Impacts from the Use Alternative would be more severe than under the Protection, Balanced, and, probably, the No Action Alternatives.

No Grazing would completely eliminate any potential for impacts by livestock on unique plant assemblages or on Rare, Threatened, or Endangered species.

In accordance with the condition, trend, and production projections over twenty years, the No Action Alternative would cause a reduction in production by 23 percent and a general overall decline in condition and trend on most perennial allotments. The other alternatives reflect a positive increase in carrying capacity and condition and trend. There is a significant response in vegetative condition and trend reflecting an increase in perennial forage production over a twenty-year period for all perennial forage species.

It should be re-emphasized that the production estimates are for forage contributed by perennial plants. This capacity is based on the ability of the forage plants to be grazed back to a level not detrimental to the plant, and, like pruning, may even be beneficial. Once the proper use of the plant is exceeded by grazing animals, however, forage must be acquired from further removal of plant parts which produce or contain plant food reserves which are essential for regrowth.

If this continues annually over a period of time, the forage plants will decrease in vigor and reproductive capabilities. This would lead eventually to replacement by other plants that are usually less palatable to grazing animals, or possibly by native or introduced annual plants.

Table EC-3

SIGNIFICANT IMPACTS ON RT&ES AND UPAS BY ALTERNATIVE

Key Issues	No Action	Protection	Balanced	Use
Total numbers of Rare, Threatened, or Endangered plant localities which could be impacted.	188-263	154	188	263
Total numbers of unique plant assemblages which could be impacted.	82-118	67	82	118

There are 144 Rare, Threatened, or Endangered plant species located in the CDCA, found at a few hundred collecting sites, and 43 different unique plant assemblages, found at over 60 individual sites. Many of these are potentially impacted by more than one use as shown in the preceding table. Nevertheless, the Protection Alternative has potentially fewer impacts than the Balanced Alternative, and the Balanced Alternative has potentially fewer impacts than the Use Alternative. The No Action Alternative relies to a large extent on ad hoc administrative controls, and vegetative impacts are thus uncertain, but projected to fall between those of the Balanced and Use Alternatives.

Table EC-4

ALLOCATIONS AFFECTING VEGETATION

Key Issues	No Action	Protection	Balanced	Use
Vegetation Within Grazing Allotments:				
Impacted Area				
Total	4,800,621 acres	5,331,121 acres	5,331,121 acres	5,331,121 acres
Perennial	3,240,669 acres	3,284,469 acres	3,284,469 acres	3,284,469 acres
Ephemeral	1,559,952 acres	2,006,152 acres	2,006,152 acres	2,006,152 acres
Total Area of Allotments Occupied By WH&Bs Populations	3,233,512 acres	3,350,012 acres	3,350,012 acres	3,350,012 acres
Existing or Proposed Use Livestock:	104,197T	54,286T	54,023T	53,407T
(1979)Perennial	50,557T (31.2 lb/acre)	37,421T (22.8 lb/acre)	39,185T (23.9 lb/acre)	41,132T (25.0 lb/acre)
(1978)Ephemeral	21,085T (27.0 lb/acre)	______[a]	______[a]	______[a]
Wildlife	3,289T (1.4 lb/acre)	5,242T (2.0 lb/acre)	4,661T (1.7 lb/acre)	3,932T (1.5 lb/acre)
WH&Bs[b]	29,266T (12.1 lb/acre)	11,623T (4.4 lb/acre)	10,177T (3.8 lb/acre)	8,362T (3.1 lb/acre)
Vegetation Within WH&Bs Herd-Management Areas:				
Impacted Area	3,506,270 acres	3,506,270 acres	3,506,270 acres	3,506,270 acres
Existing(1979) or Proposed Use	56,632T[c] (22.3 lb/acre)	24,865T (14.2 lb/acre)	23,371T (13.3 lb/acre)	21,032T (12.0 lb/acre)

[a] The actual amount of ephemeral forage which could be utilized is variable, depending upon weather conditions (precipitation), phenological patterns, and proposed AMPs. In most cases a minimum of 200 lb/acre standing crop is necessary before pasturing animals, and a maximum level of utilization, not to exceed 25 percent in sensitive areas or 50 percent in other areas. The exceptions would be critical tortoise habitat where only one pass of a band of sheep is allowed. Except for these latter cases, the minimum forage during a year of marginal production would be about 25 percent times 200 lb/acre = 50 lb/acre. This amount is about 23 lb/acre greater than the average use of all ephemeral allotments during 1977-78 (see above). The expected productivity of ephemerals could be less than 100 lb/acre during marginal years to over 600 lb/acre during outstanding years.

[b] Includes burros present in proposed allotments, but not allocated forage in tables GR-2 to 5.

[c] In less than 10 years at current recruitment rates, herd populations will double. Maintenance of WH&Bs herds would therefore require additional forage involving either expansion of herds into previously unoccupied areas or severe overgrazing within the present ones. The same thing applies to WH&Bs populations within grazing allotments.

Wildlife

As indicated in Part IV a, the Introduction to Environmental Impact Assessment on pages 177 and 178, cumulative impacts to wildlife resources are measured from a different perspective than the impacts on other resources. Other resource analyses measured impacts as departures from present condition as each of the four plan alternatives is applied and assessed them as positive or negative in relation to this baseline accordingly. The wildlife analysis started from the same baseline, but gave more weight to future trend effects of alternatives particularly in the cases of significant, sensitive, Rare, Threatened, and Endangered species which are numerous and widely dispersed in the CDCA. Thus, if the net trend of a plan alternative on such species or their habitat is positive, but the species still remains in a state of decline, or problems continue, the anticipated impact is treated as significantly negative even though the alternative provides actions reducing the rate of decline.

The summary assessment of cumulative impacts to wildlife in this section focuses on the negative impacts of each alternative that are residual after taking into account positive impacts. In a number of instances, the approach uses "worst case" forecasts, although the probability of actions taking place on areas in which class guidelines permit such actions varies greatly.

The reader should note that this technique is not precisely the same as other resource analysis approaches used in the EIS part of the plan, but is used to place emphasis on residual impacts. This should not be misconstrued, rather it should be read in perspective. To achieve this perspective of alternative plan impacts on wildlife both positive and negative, it is recommended that the reviewer carefully study Table A-2, "Comparison of Major Plan Actions" on pages 37 through 47, with particular attention to its wildlife management components on pages 42 through 45. In-depth discussion of wildlife protection and management features for each alternative may be found in Part II-C-8, the Wildlife Element on pages 135 through 157.

The impact evaluation section in the following paragraphs should be read as a summary of residual negative impacts.

In general, wildlife resources will be adversely affected under all of the Desert Plan alternatives. As could be expected, however, the Protection Alternative would be most beneficial to this resource, followed in descending order by the Balanced and Use Alternatives. The accompanying table indicates the amount of habitat that would be affected and the relative degree of impact for each important species and each special habitat area. It is important to note that the No Action Alternative should not be compared directly to other alternatives because of the different methods of approach and analysis. Cumulative impacts for No Action were assessed using only a general class map. The action alternatives were evaluated using much more information: general class maps, element maps, and element narratives.

■ No Action Alternative. This alternative has an overall negative impact on wildlife resources. There will be few active wildlife management programs initiated or special habitat areas established to conserve prime wildlife resources; officially listed species and their habitats may be the exception. However, parts or all of the habitat within the CDCA of eight of 13 listed species (Black Toad, Aleutian Canada Goose, Bald Eagle, Brown Pelican, Yuma Clapper Rail, California Black Rail, California Yellow-billed Cuckoo, and Mohave Ground Squirrel) would be negatively affected under this alternative. Substantial portions of Desert Tortoise crucial habitat would also be adversely impacted, as would habitat for 18 species be considered for sensitive status by BLM. Of the 70 special wildlife areas in the CDCA, 8.6 percent would be severely impacted, and 32.8 percent would receive negative impacts. The remaining 58.6 percent would receive a balance of both low positive and low negative impacts.

Management Framework Plans (MFPs) covering 20 percent of the CDCA have been completed for three BLM planning units (Yuha, El Paso, Red Mountain), and a fourth is in draft (East Mojave). The MFPs contain a number of beneficial decisions for wildlife resources, including establishment of primitive areas in Owens Peak, the In-ko-pahs, and the Argus, Fish Creek, Coyote, and Lava Mountains; Research Natural Areas at San Sebastian Marsh, Mt. Signal, Fremont, Great Falls Basin, and Cerro Coso; Outstanding Natural Areas at Jacumba and San Sebastian; and special wildlife management areas in Horse and Sage Canyons. Some of these areas do not have full implementation plans; however, eventual completion of management plans would contribute substantially to improved wildlife values.

■ Protection Alternative: Although the Protection Alternative will be the most preservation-oriented toward wildlife resources, several species and habitats will still be adversely affected. In this alternative, seven officially listed species (particularly the Black Toad) could have all or substantial portions of their habitats affected deleteriously. Substantial portions of Desert Tortoise habitat in densities of 20 to 100/mi^2 would be negatively affected, as would habitat for 12 species being considered for sensitive status (e.g., Desert Bighorn, Golden Eagle, etc.). Desert Bighorn populations would continue on current trends with some herds continuing to decline and others remaining stable.

Of 70 special habitat areas, 37.1 percent would receive negative impacts; 1.4 percent would receive severe negative impacts; 34.3 percent would sustain no substantial positive or negative impacts; and 27.1 percent would receive positive impacts. Thus, a large number of habitats and ecosystems either unique to or representative of the CDCA would be substantially damaged or lost.

* * *

■ Balanced Alternative. Implementation of this alternative would have a greater negative impact on wildlife resources than the Protection Alternative. Positive wildlife actions are fewer, smaller, and more fragmented as the amounts of lands in classes C and L are reduced to about 58 percent and are fragmented by interspersed areas of classes M and I. Eight officially listed species would receive substantial impacts to their habitats, contributing to extirpations in some cases and possible extinctions in others (e.g., Mohave Ground Squirrel and Black Toad). The Desert Tortoise would receive severe negative impacts to high sensitivity habitat, with extirpation predicted in three of four major crucial habitat areas. Thirteen species being considered for sensitive status by BLM would be substantially and severely affected, creating a need for official listing. Examples include the Amargosa River Pupfish, Nevada Speckled Dace, Flat-tailed Horned Lizard, Amargosa Vole, and Desert Bighorn.

Of 70 special wildlife habitat areas, 71.4 percent would receive either negative or severe negative impacts under the Balanced Alternative. This alternative and the Use Alternative would affect the lowlands and valleys more than the uplands and mountainous regions. Species such as the Desert Tortoise and Flat-tailed Horned Lizard are highly negatively impacted. Movement corridors for Desert Bighorn Sheep also receive highly negative impacts under this alternative from utility corridor construction, mineral exploration and extraction or intensive motorized vehicle use.

* * *

■ Use Alternative. Implementation of this alternative would have the second-most severe net negative impact of all alternatives on wildlife resources. The amounts of C and L classes would be reduced to a little over 20 percent of the CDCA, and very few Habitat Management Plans would be implemented. Nine of 13 officially listed species would receive negative or severe negative impacts to their habitats and populations. The Desert Tortoise would lose 97 percent of its habitat desertwide. The Desert Tortoise Natural Area would be the only sanctuary for this species and would probably not be viable because of small size. Sixteen species being considered for sensitive status by BLM would be severely affected, with extirpations to many populations. For example, 25 percent of Desert Bighorn herds would be extirpated, and most remaining herds would decline severely. Twenty-three significant species would also be adversely affected, and some would subsequently qualify for sensitive or official listings. Special habitat areas would, for the most part, be lost. About 90 percent would be negatively or severely negatively affected. Only 5.7 percent of the CDCA would receive no substantial impacts; 4.3 percent would have positive impacts.

In summary, none of the four alternatives are free from negative or severe negative impacts to wildlife resources. Deleterious effects would be lower, but still substantial, in the Balanced and Protection Alternatives, and higher and more severe in the No Action and Use Alternatives.

Tables EC-5 and EC-6 provide a comparison of the percentages of wildlife species ranges and sensitive habitats located within areas subject to varying degrees of negative or positive cumulative impacts under each of the plan alternatives. Cumulative impact ratings were assigned on the basis of the numbers and kinds of beneficial or adverse impacts which would occur within the indicated portions of each species range or over the distribution of each habitat type under each of the plan alternatives.

Cumulative impacts for the No Action, Protection, Balanced, and Use Alternatives were evaluated using the following scale:

● 1) Impacts with severe disturbance (total habitat loss)

- a. wind generation and microwave sites
- b. ORV open areas
- c. areas with combinations of three or more of the activities listed below in 2).

◑ 2) Impacts with high disturbance to wildlife habitats

- a. utility corridors
- b. locatables and leasables (i.e. extraction and development of mineral resources)
- c. livestock grazing allotments
- d. wild horse and burro herd areas
- e. existing roads and ways
- f. KGRA's

○ 3) Impacts neither highly positive nor highly negative in nature

- a. Class L areas with no specifically cited impacts
- b. wilderness areas where livestock grazing and/or wild horses and burros occur and where a special wildlife habitat management area exists

⦶ 4) Positive Impacts to wildlife habitats and species

- a. designated wilderness areas
- b. ACECs established for nonwidlife purposes

⊕ 5) Highly positive Impacts

- a. ACECs of critical importance to wildlife, with management prescriptions designed to protect these resources.

Because land use decisions in the No Action Alternative are basically made on a case-by-case basis, evaluation of the No Action Alternative impacts to wildlife is difficult to project on a cumulative basis. Thus, some potential negative or positive impacts of the No Action Alternative may not be reflected in the summary rating given. Actions in the other alternatives are better defined due to the identification of such designations as wilderness areas, utility corridors, power plant siting areas, and special habitat management areas. As a result, some impacts are picked up in assessments of these alternatives that were not clearly defined enough for coverage in the No Action Alternative.

A number of the apparent increases in negative impacts between the No Action and Protection Alternatives may be related to the foregoing assessment problem. In other cases, there is a direct reason for the anomaly. For example, the higher negative impacts on the Aleutian Canada Goose, Bald Eagle, and Brown Pelican in the Protection Alternative, as compared to the No Action Alternative, are the result of land tenure adjustment proposals in all of the action elements. No tenure adjustment is prescribed in the No Action Alternative, but some public lands along the Salton Sea of value to these species are indicated for transfer to private ownership under the action alternatives.

Table EC - 5

SIGNIFICANT IMPACTS ON WILDLIFE BY ALTERNATIVE
Amount of habitat affected and relative degree of impact

Listed Species	No Action	Protection	Balanced	Use
Mojave Chub	1 locality	1 locality	1 locality	1 locality
1 Highly negative ●				
2 Negative ◑				
3 No substantial impact ○	100%			
4 Positive ⦶				
5 Highly positive ⊕		100%	100%	100%
Desert Slender Salamander	1 locality	1 locality	1 locality	1 locality
●				
◑				
○	100%			
⦶		100%	100%	100%
⊕				
Hypothetical Tehachapi Slender Salamander	22,400 acres	22,400 acres	22,400 acres	22,400 acres
●				
◑				11%
○	100%	100%	100%	89%
⦶				
⊕				
Black Toad	3,200 acres	3,200 acres	3,200 acres	3,200 acres
●		40%	80%	100%
◑	100%	60%	20%	
○				
⦶				
⊕				
Aleutian Canada Goose	8,320 acres	8,320 acres	8,320 acres	8,320 acres
●				100%
◑	38%	100%	100%	
○	62%			
⦶				
⊕				
Bald Eagle	8,320 acres	8,320 acres	8,320 acres	8,320 acres
●				100%
◑	38%	100%	100%	
○	62%			
⦶				
⊕				

Listed Species (Cont.)	No Action	Protection	Balanced	Use
Brown Pelican	8,320 acres	8,320 acres	8,320 acres	8,320 acres
1 Highly negative ●				100%
2 Negative ◑	38%	100%	100%	
3 No substantial impact ○	62%			
4 Positive ⦶				
5 Highly positive ⊕				
Yuma Clapper Rail	1 locality	1 locality	1 locality	1 locality
●				
◑	100%	100%	100%	100%
○				
⦶				
⊕				
Black Rail	16,000 acres	16,000 acres	5,760 acres	5,760 acres
●	80%			44%
◑		64%	33%	
○	20%			
⦶		24%	56%	
⊕		12%	11%	56%
Yellow-billed Cuckoo	4,480 acres	4,480 acres	4,480 acres	4,480 acres
●				
◑	40%		14%	14%
○	60%			
⦶		14%		
⊕		86%	86%	86%
Mojave Ground Squirrel	1,408,000 ac.	1,408,000 ac.	1,408,000 ac.	1,408,000 ac.
●	15%	14%	42%	59%
◑	56%	39%	53%	37%
○	29%	40%	less than 1%	
⦶		5%	3%	2%
⊕		2%	2%	2%
Reintroduction California Bighorn Sheep	57,600 acres	57,600 acres	57,600 acres	57,600 acres
●	11%			17%
◑	89%	4%	100%	83%
○		96%		
⦶				
⊕				

Table EC-5 (cont.)

SIGNIFICANT IMPACTS ON WILDLIFE BY ALTERNATIVE

Amount of habitat affected and relative degree of impact

Listed Species (Cont.)	No Action	Protection	Balanced	Use
Peninsular Bighorn	19,200 acres	19,200 acres	19,200 acres	19,200 acres
Concentration				
1 Highly negative ●				
2 Negative ◑				
3 No substantial impact ○	100%			
4 Positive ⦶		100%	100%	100%
5 Highly positive ⊕				
Peninsular Bighorn	51,200 acres	51,200 acres	51,200 acres	51,200 acres
Permanent				
●				
◑				13%
○	100%	5%	5%	10%
⦶		95%	95%	78%
⊕				
Peninsular Bighorn	76,800 acres	76,800 acres	76,800 acres	76,800 acres
●				
◑		7%	7%	33%
○	100%	9%	14%	17%
⦶		84%	79%	50%
⊕				
Peninsular Bighorn	12,800 acres	12,800 acres	12,800 acres	12,800 acres
Transient				
●				50%
◑		45%	80%	50%
○	100%			
⦶		55%	20%	
⊕				
Peninsular Bighorn				
Total (less corridors)	160,000 acres	160,000 acres	160,000 acres	160,000 acres
●				4%
◑		7%	10%	24%
○	100%	6%	8%	11%
⦶		87%	82%	61%
⊕				
BLM Sensitive Species				
Desert Tortoise	1,760,000 ac.	1,760,000 ac.	1,760,000 ac.	1,760,000 ac.
(20-50/sq. mi.)				
●	10%	3%	34%	52%
◑	46%	37%	53%	46%
○	44%	49%	10%	1%
⦶		11%	3%	2%
⊕		less than 1%		

BLM Sensitive Species (Cont)	No Action	Protection	Balanced	Use
Desert Tortoise	896,000 ac.	896,000 ac.	896,000 ac.	896,000 ac.
(50-100/sq. mi.)				
1 Highly negative ●	5%	3%	22%	61%
2 Negative ◑	51%	28%	42%	38%
3 No substantial impact ○	44%	56%	33%	less than 1%
4 Positive ⦶		12%	2%	1%
5 Highly positive ⊕		1%	1%	
Desert Tortoise	448,000 ac.	448,000 ac.	448,000 ac.	448,000 ac.
(100-250/sq. mi.)				
●	9%	1%	41%	71%
◑	48%	8%	31%	29%
○	43%	79%	27%	
⦶		12%	less than 1%	less than 1%
⊕		less than 1%	less than 1%	less than 1%
Desert Tortoise	112,000 ac.	112,000 ac.	112,000 ac.	112,000 ac.
(more than 250/sq. mi.)				
●	44%		61%	63%
◑	66%		18%	15%
○		77%		
⦶		1%		
⊕		22%	22%	22%
Desert Tortoise	3,216,000 ac.	3,216,000 ac.	3,216,000 ac.	3,216,000 ac.
Total				
●	10%	2%	32%	57%
◑	48%	29%	45%	40%
○	42%	56%	19%	1%
⦶		11%	3%	1%
⊕		1%	1%	1%
Proposed BLM Sensitive				
Species				
Shoshone Cave Whip Scorpion	1 locality	1 locality	1 locality	1 locality
●				
◑	100%			
○				100%
⦶		100%	100%	
⊕				
Andrew's Dune Scarab	160,000 ac.	160,000 ac.	160,000 ac.	160,000 ac.
Beetle				
●	77%	16%	21%	77%
◑	11%	35%	52%	
○	12%		4%	
⦶		26%		
⊕		23%	23%	23%

Table EC-5 (cont.)

SIGNIFICANT IMPACTS ON WILDLIFE BY ALTERNATIVE

Amount of habitat affected and relative degree of impact

Proposed BLM Sensitive Species (Cont)	No Action	Protection	Balanced	Use
Amergosa River Pupfish	6,400 acres	5,120 acres	6,400 acres	5,120 acres
1 Highly negative ●	65%	13%	40%	38%
2 Negative ◑	35%	25%	30%	13%
3 No substantial impact ○		25%		
4 Positive ⦶		38%	30%	50%
5 Highly positive ⊕				
Desert Pupfish	12,800 acres	12,800 acres	7,680 acres	7,680 acres
●				42%
◑	38%	65%	42%	
○	62%			
⦶		10%	17%	17%
⊕		25%	42%	42%
Nevada Speckled Dace	16,000 acres	16,000 acres	16,000 acres	12,800 acres
●		8%	12%	30%
◑	91%	28%	32%	55%
○	9%	20%	44%	5%
⦶		32%		
⊕		12%	12%	10%
Inyo Mountain Salamander	38,400 acres	38,400 acres	38,400 acres	38,400 acres
●		2%	2%	2%
◑	100%			
○		12%	95%	95%
⦶		83%		
⊕		3%	3%	3%
San Sebastian Leopard Frog	6,400 acres	6,400 acres	6,400 acres	6,400 acres
●				
◑				
○	100%			
⦶				
⊕		100%	100%	100%
Western Pond Turtle	1 locality	1 locality	1 locality	1 locality
●				
◑	100%			
○				
⦶				
⊕		100%	100%	100%

Proposed BLM Sensitive Species (Cont)	No Action	Protection	Balanced	Use
Magic Gecko (known range)	76,800 acres	76,800 acres	76,800 acres	76,800 acres
1 Highly negative ●	5%		3%	11%
2 Negative ◑		23%	9%	85%
3 No substantial impact ○	95%	8%	13%	4%
4 Positive ⦶		69%	76%	
5 Highly positive ⊕				
Magic Gecko (possible range)	128,000 ac.	128,000 ac.	128,000 ac.	128,000 ac.
●				
◑				
○	100%		13%	18%
⦶		100%	87%	83%
⊕				
Magic Gecko Total	204,800 ac.	204,800 ac.	204,800 ac.	204,800 ac.
●	2%		1%	4%
◑		8%	3%	32%
○	98%	3%	13%	13%
⦶		88%	83%	52%
⊕				
Flat-tailed Horned Lizard	134,400 acres	134,400 acres	134,400 acres	134,400 acres
●	15%	26%	43%	73%
◑	36%	46%	41%	25%
○	49%	23%	7%	
⦶		5%	10%	2%
⊕				
Coachella Valley Fringe-toed lizard	3,200 acres	3,200 acres	3,200 acres	3,200 acres
●				
◑	100%			
○				
⦶				
⊕		100%	100%	100%

Proposed BLM Sensitive Species (Cont)	No Action		Protection		Balanced		Use	
Golden Eagle	3.2M ac.	83	3.2M ac.	83	3.2M ac.	79	3.2M ac.	81
Probable Foraging Range Eyries								
●	5%	2%	4%	5%	17%	13%	62%	49%
◑	46%	52%	34%	33%	59%	54%	28%	35%
○	49%	46%	47%	40%	14%	18%	3%	6%
⦶			15%	23%	10%	15%	6%	10%
⊕			1%		< 1%		<1%	

Table EC - 5 (cont.)
SIGNIFICANT IMPACTS ON WILDLIFE BY ALTERNATIVE
Amount of habitat affected and relative degree of impact

Proposed BLM Sensitive Species (Cont)	No Action	Protection	Balanced	Use
Osprey	8,960 acres	8,960 acres	8,960 acres	8,960 acres
1 Highly negative ●		7%	7%	100%
2 Negative ◑	43%	93%	93%	
3 No substantial impact ○	57%			
4 Positive ⦶				
5 Highly positive ⊕				
Elf Owl	1 locality	1 locality	1 locality	1 locality
●				
◑				
○	100%			
⦶				
⊕		100%	100%	100%
Vermilion Flycatcher	6,400 acres	6,400 acres	6,400 acres	6,400 acres
●			10%	
◑	59%		10%	10%
○	41%			
⦶		30%	10%	10%
⊕		70%	70%	80%
Least Bell's Vireo	6,400 acres	8,320 acres	6,400 acres	6,400 acres
●				
◑	39%		10%	10%
○	61%	8%	10%	10%
⦶		38%	10%	10%
⊕		54%	70%	70%
Summer Tanager	7,680 acres	7,680 acres	7,680 acres	7,680 acres
●				8%
◑	74%		8%	8%
○	26%			
⦶		17%	8%	
⊕		83%	83%	83%
Inyo Brown Towhee	12,800 acres	12,800 acres	12,800 acres	12,800 acres
●				10%
◑				
○	100%	10%	10%	
⦶				
⊕		90%	90%	90%

Proposed BLM Sensitive Species (Cont)	No Action	Protection	Balanced	Use
Kingston Mountain Chipmunk	41,600 acres	41,600 acres	41,600 acres	41,600 acres
1 Highly negative ●				11%
2 Negative ◑	21%	37%	57%	17%
3 No substantial impact ○	79%		8%	
4 Positive ⦶		63%	35%	72%
5 Highly positive ⊕				
Coachella Round-tailed Ground Squirrel	3,200 acres	3,200 acres	3,200 acres	3,200 acres
●				
◑	100%			
○				
⦶				
⊕		100%	100%	100%
Yellow-eared Pocket Mouse	57,600 acres	57,600 acres	57,600 acres	57,600 acres
●		4%	7%	14%
◑		12%	9%	42%
○	100%	83%	84%	43%
⦶				
⊕				
Panamint Kangaroo Rat	89,600 acres	89,600 acres	89,600 acres	89,600 acres
●			less than 1%	47%
◑	5%	51%	79%	5%
○	95%	49%	16%	32%
⦶			5%	16%
⊕				
Amergosa Vola	1,920 acres	1,920 acres	1,920 acres	1,920 acres
●				
◑	80%	33%	67%	67%
○	20%			
⦶		33%		
⊕		33%	33%	33%
Desert Bighorn (Concentration)	96,000 acres	96,000 acres	96,000 acres	96,000 acres
●	15%		2%	9%
◑	31%	10%	55%	66%
○	54%	24%	19%	8%
⦶		66%	25%	17%
⊕				

Table EC-5 (cont.)

SIGNIFICANT IMPACTS ON WILDLIFE BY ALTERNATIVE

Amount of habitat affected and relative degree of impact

Proposed BLM Sensitive Species (Cont)	No Action	Protection	Balanced	Use
Desert Bighorn (Permanent)	640,000 acres	640,000 acres	640,000 acres	640,000 acres
1 Highly negative ●		1%	2%	18%
2 Negative ◑	52%	15%	40%	55%
3 No substantial impact ○	48%	34%	15%	14%
4 Positive ⦶		50%	44%	14%
5 Highly positive ⊕				
Desert Bighorn (Seasonal)	1,088,000 ac.	1,088,000 ac.	1,088,000 ac.	1,088,000 ac.
●	8%	1%	3%	25%
◑	32%	26%	40%	52%
○	60%	26%	29%	11%
⦶		45%	27%	11%
⊕		2%	1%	1%
Desert Bighorn (Transient)	1,024,000 ac.	1,024,000 ac.	1,024,000 ac.	1,024,000 ac.
●		5%	9%	33%
◑	64%	37%	63%	51%
○	34%	29%	13%	11%
⦶		30%	15%	5%
⊕				
Desert Bighorn (Corridors)	17 Corridors	17 Corridors	17 Corridors	17 Corridors
●		6%	57%	29%
◑	91%	47%	24%	65%
○	9%	24%	12%	6%
⦶		24%	6%	
⊕				
Desert Bighorn (Reintroduction)	224,000 acres	224,000 acres	224,000 acres	224,000 acres
●			15%	18%
◑	48%	34%	80%	80%
○	52%	23%	4%	2%
⦶		43%	1%	less than 1%
⊕				
Desert Bighorn (Total less corridor and reintroduction)	2,848,000 ac.	2,848,000 ac.	2,848,000 ac.	2,848,000 ac.
●	5%	2%	5%	26%
◑	46%	27%	49%	53%
○	49%	29%	20%	11%
⦶		41%	26%	10%
⊕		1%	1%	less than 1%

Significant Species	No Action	Protection	Balanced	Use
(Hypothetical)				
Amargosa Toad	2,560 acres	2,560 acres	2,560 acres	2,560 acres
1 Highly negative ●	17%		80%	80%
2 Negative ◑	83%	80%		
3 No substantial impact ○				
4 Positive ⦶				
5 Highly positive ⊕		20%	20%	20%
Pacific Treefrog	6,400 acres	6,400 acres	6,400 acres	6,400 acres
●				
◑	100%			
○		80%	70%	100%
⦶		20%	30%	
⊕				
Small-Scaled Lizard	11,520 acres	11,520 acres	11,520 acres	11,520 acres
●				
◑		44%		83%
○	100%	6%	83%	17%
⦶		50%	17%	
⊕				
Colorado Fringe-toed Lizard	494,720 acres	494,720 acres	494,720 acres	494,720 acre
●	19%	14%	26%	61%
◑	35%	58%	61%	28%
○	46%	7%		
⦶		11%	3%	1%
⊕		10%	10%	11%
Panamint Alligator Lizard	5 localities	5 localities	5 localities	5 localities
●				
◑	80%	20%	20%	20%
○	20%	40%	80%	80%
⦶		40%		
⊕				
Gila Monster	2 localities	2 localities	2 localities	2 localities
●			50%	100%
◑	50%	100%	50%	
○	50%			
⦶				
⊕				

Table EC-5 (cont.)
SIGNIFICANT IMPACTS ON WILDLIFE BY ALTERNATIVE
Amount of habitat affected and relative degree of impact

Significant Species (Cont)	No Action		Protection		Balanced		Use	
Ring-necked Snake	--		--		--		--	
1 Highly negative ●								
2 Negative ◑								
3 No substantial impact ○								
4 Positive ⦶								
5 Highly positive ⊕								
Black-banded Snake	4 localities		4 localities		4 localities		4 localities	
●							50%	
◑	67%		50%		75%			
○	33%		25%				50%	
⦶			25%		25%			
⊕								
Swainson's Hawk	128,000 acres		128,000 acres		128,000 acres		128,000 acres	
●			3%		3%		41%	
◑	1%		90%		97%		59%	
○	99%		8%		1%		1%	
⦶								
⊕								
Prairie Falcon	4,480,000 acres	111	4,480,000 acres	110	4,480,000 acres	110	4,480,000 acres	96
Probable Foraging Area Eyries								
●	6%	3%	2%	1%	12%	6%	52%	14%
◑	45%	49%	31%	33%	64%	40%	37%	63%
○	49%	49%	45%	31%	12%	22%	6%	11%
⦶			21%	31%	12%	31%	4%	11%
⊕			1%	5%	1%	1%	1%	1%
Harris Hawk	--		--		--		--	
●								
◑								
○								
⦶								
⊕								
Yellow Warbler	--		--		--		--	
●								
◑								
○								
⦶								
⊕								

Significant Species (Cont)	No Action		Protection		Balanced		Use	
Wied's Crested Flycatcher	1 locality		1 locality		1 localities		1 locality	
1 Highly negative ●	100%							
2 Negative ◑								
3 No substantial impact ○								
4 Positive ⦶			100%		100%		100%	
5 Highly positive ⊕								
Gray Vireo	48,000 acres		48,000 acres		48,000 acres		48,000 acres	
●							68%	
◑	28%		5%		5%		1%	
○	72%		59%		59%		1%	
⦶			27%		27%		20%	
⊕			9%		9%		9%	
Yellow-breasted Chat	16,000 acres		16,000 acres		16,000 acres		16,000 acres	
●			8%		3%		28%	
◑	47%		8%		20%		12%	
○	53%		20%		12%		4%	
⦶			8%		4%			
⊕			56%		56%		56%	
Desert Shrew	28,800 acres		28,800 acres		28,800 acres		28,800 acres	
●							7%	
◑					67%		84%	
○	100%		67%		20%		7%	
⦶			33%		13%		2%	
⊕								
Big Brown Brown Bat	5 Roosts	1 coll. site	5 Roosts	1 coll. site	5 Roosts	1 coll. site	5 Roosts	10 coll. sites
Roosts Collection Sites								
●		10%						30%
◑	100%	45%	20%	55%	60%	73%	60%	40%
○		45$	20%	9%		9%		10%
⦶			60%	36%	40%	18%	40%	20%
⊕								
California Leaf-nosed Bat	12 Roosts	9 coll. sites	12 Roosts	9 coll. sites	12 Roosts	9 coll. sites	12 Roosts	9 coll. sites
Roosts Collection Sites								
●	8%	22%		11%	33%	11%	17%	11%
◑	75%	78%	25%	33%	42%	44%	83%	89%
○	17%		25%	11%		22%		
⦶			50%	44%	25%	22%		
⊕								

Table EC - 5 (cont.)
SIGNIFICANT IMPACTS ON WILDLIFE BY ALTERNATIVE
Amount of habitat affected and relative degree of impact

Significant Species (Cont)	No Action		Protection		Balanced		Use	
Cave Myotis	3 Roosts	5 coll. sites	3 Roosts	5 coll. sites	3 Roosts	5 coll. sites	3 Roosts	5 coll. sites
Roosts Collection Sites								
1 Highly negative ●					67%	20%	67%	20%
2 Negative ◑	100%	100%	67%	60%	33%	80%	33%	80%
3 No substantial impact ○								
4 Positive ⦶			33%	40%				
5 Highly positive ⊕								
Townsend's Big-eared Bat	10 Roosts	16 coll. sites	10 Roosts	21 coll. sites	10 Roosts	22 coll. sites	10 Roosts	22 coll. sites
Roosts Collection Sites								
●		6%	10%		20%	14%	60%	36%
◑	29%	61%	70%	43%	70%	50%	30%	32%
○	71%	33%	10%	43%	10%	27%	10%	23%
⦶			10%	5%		5%		5%
⊕				10%		5%		5%
Pallid Bat	4 Roosts	13 coll. sites	4 Roosts	12 coll. sites	4 Roosts	13 coll. sites	4 Roosts	13 coll. sites
Roosts Collection Sites								
●				8%	25%	8%	25%	23%
◑	25%	58%	75%	50%	50%	54%	75%	46%
○	75%	42%	25%	33%	25%	15%		23%
⦶				8%	23%			
⊕								8%
Brazilian Free-tailed Bat	6		6		6		6	
(collection sites)								
●	17%						17%	
◑	50%				67%		67%	
○	33%		33%		17%			
⦶			67%		17%		17%	
⊕								
Spotted Bat	1 locality		1 locality		1 locality		1 locality	
●								
◑					100%		100%	
○	100%		100%					
⦶								
⊕								
Pocketed Free-tailed Bat	--		--		--		--	
●								
◑								
○								
⦶								
⊕								

Significant Species (Cont)	No Action	Protection	Balanced	Use
Western Mastiff Bat	--	--	--	--
1 Highly negative ●				
2 Negative ◑				
3 No substantial impact ○				
4 Positive ⦶				
5 Highly positive ⊕				
Panamint Chipmunk	112,000 acres	112,000 acres	112,000 acres	112,000 acres
●		2%	3%	47%
◑	18%	30%	70%	17%
○	82%	54%	10%	23%
⦶		14%	17%	13%
⊕				
Rock Squirrel	96,000 acres	96,000 acres	96,000 acres	96,000 acres
●	2%			60%
◑	6%	29%	72%	5%
○	92%	60%	28%	20%
⦶		11%		15%
⊕				
Little Pocket Mouse	4 localities	4 localities	4 localities	4 localities
●				
◑	86%			
○	14%			
⦶		50%	50%	50%
⊕		50%	50%	50%
Pale Kangaroo Mouse	204,800 acres	204,800 acres	204,800 acres	204,800 acres
●		1%	4%	25%
◑	85%	98%	78%	70%
○	15%		17%	
⦶				3%
⊕		1%	1%	1%
Ord Kangaroo Rat	1 locality	1 locality	1 locality	1 locality
●				100%
◑	100%	100%	100%	
○				
⦶				
⊕				

Table EC - 5 (cont.)
SIGNIFICANT IMPACTS ON WILDLIFE BY ALTERNATIVE
Amount of habitat affected and relative degree of impact

Significant Species (Cont)	No Action	Protection	Balanced	Use
Chisel-toothed Kangaroo Rat	1 locality	1 locality	1 locality	1 locality
1 Highly negative ●			100%	100%
2 Negative ◑	100%	100%		
3 No substantial impact ○				
4 Positive ⦶				
5 Highly positive ⊕				
Mojave Vole	--	--	--	--
●				
◑				
○				
⦶				
⊕				
Endemic Beetles (Cadiz Dunes)	32,000 acres	32,000 acres	32,000 acres	32,000 acres
●	5%	10%	100%	100%
◑	89%	90%		
○				
⦶				
⊕				
Endemic Beetles (Dumont Dunes)	1,920 acres	1,920 acres	1,920 acres	1,920 acres
●	100%		100%	100%
◑				
○		100%		
⦶				
⊕				
Endemic Beetles (Eureka Dunes)	2,560 acres	2,560 acres	2,560 acres	2,560 acres
●				
◑				
○	100%			
⦶				
⊕		100%	100%	100%
Endemic Beetles (Kelso Dunes)	25,600 acres	25,600 acres	25,600 acres	25,600 acres
●				
◑				
○	100%			
⦶				
⊕		100%	100%	100%
Endemic Beetles (Algodones Dunes)	160,000 acres	160,000 acres	160,000 acres	160,000 acres
1 Highly negative ●	72%	16%	21%	77%
2 Negative ◑		35%	52%	
3 No substantial impact ○	28%		4%	
4 Positive ⦶		26%		
5 Highly positive ⊕		23%	23%	23%
Endemic Beetles (Panamint Dunes)	3,200 acres	3,200 acres	3,200 acres	3,200 acres
●			100%	100%
◑				
○	100%			
⦶		100%		
⊕				
Endemic Beetles (Saline Dunes)	2,560 acres	2,560 acres	2,560 acres	2,560 acres
●				
◑			100%	100%
○	100%	100%		
⦶				
⊕				

Table EC - 6

SIGNIFICANT IMPACTS ON SPECIAL HABITAT AREAS BY ALTERNATIVE

Amount of habitat affected and relative degree of impact

Special Habitat Areas	No Action	Protection	Balanced	Use
Cottonwood Creek Riparian Area	3,840 acres	3,840 acres	3,840 acres	3,840 acres
1 Highly negative ●			50%	100%
2 Negative ◑	100%		50%	
3 No substantial impact ○		100%		
4 Positive ⦶				
5 Highly positive ⊕				
Deep Springs Valley	6,400 acres	6,400 acres	6,400 acres	6,400 acres
●		70%	100%	100%
◑	100%	20%		
○				
⦶		10%		
⊕				
East Slope of Inyo Mountains	40,960 acres	40,960 acres	40,960 acres	40,960 acres
●				8%
◑	100%			
○		38%	98%	90%
⦶		61%		
⊕		2%	2%	2%
Saline Valley Dunes	2,560 acres	2,560 acres	2,560 acres	2,560 acres
●				100%
◑			36%	
○	100%	100%	64%	
⦶				
⊕				
Grapevine Canyon Riparian Area	5,120 acres	5,120 acres	5,120 acres	5,120 acres
●				
◑	18%		50%	75%
○	82%	100%	50%	25%
⦶				
⊕				
Panamint Dunes	1,920 acres	1,920 acres	1,920 acres	1,920 acres
●			100%	100%
◑				
○	100%			
⦶		100%		
⊕				

Special Habitat Areas (Cont)	No Action	Protection	Balanced	Use
California Valley Mesquite Thicket	3,840 acres	3,840 acres	3,840 acres	3,840 acres
1 Highly negative ●	27%			83%
2 Negative ◑	73%	100%	100%	17%
3 No substantial impact ○				
4 Positive ⦶				
5 Highly positive ⊕				
Lee Flat Shadscale Habitat	33,280 acres	33,280 acres	33,280 acres	33,280 acres
●				27%
◑	69%	100%	100%	73%
○	31%			
⦶				
⊕				
Robber's Roost Raptor Area	3,200 acres	3,200 acres	3,200 acres	3,200 acres
●				
◑				
○	100%	100%	100%	100%
⦶				
⊕				
Kelso Valley Oak Woodland	21,120 acres	21,120 acres	5,760 acres	0 acres
●				
◑			100%	
○	100%	27%		
⦶		73%		
⊕				
West Mojave Saltbush Habitat	185,600 acres	185,600 acres	185,600 acres	185,600 acres
●		2%	66%	64%
◑	99%	10%	33%	36%
○	10%	87%	less than 1%	
⦶		9%		
⊕		1%	1%	1%
Newberry/Granite Mountains Raptor Breeding Area	256,000 acres	256,000 acres	256,000 acres	256,000 acres
●	9%		37%	50%
◑	91%	24%	30%	50%
○		40%	25%	
⦶		36%	8%	
⊕				

Table EC - 6 (cont.)

SIGNIFICANT IMPACTS ON SPECIAL HABITAT AREAS BY ALTERNATIVE

Amount of habitat affected and relative degree of impact

Special Habitat Areas (Cont)	No Action	Protection	Balanced	Use
Red Mtn/El Paso Raptor	304,000 acres	304,000 acres	304,000 acres	304,000 acres
Breeding Area				
1 Highly negative ●	22%		65%	78%
2 Negative ◑	12%	29%	33%	20%
3 No substantial impact ○	66%	68%		
4 Positive ⌽		2%	2%	2%
5 Highly positive ⊕				
Butterbread/Jawbone	150,400 acres	150,400 acres	103,040 acres	83,840 acres
Canyons				
●	8%		23%	
◑		13%	77%	100%
○	92%	87%		
⌽				
⊕				
Koehm Lake	4,480 acres	4,480 acres	4,480 acres	4,480 acres
●	100%			100%
◑			100%	
○				
⌽		100%		
⊕				
Upper Amargosa River	2,560 acres	2,560 acres	2,560 acres	2,560 acres
Mesquite				
●			75%	100%
◑		100%		
○	100%		25%	
⌽				
⊕				
West Panamint Canyon	136,320 acres	136,320 acres	136,320 acres	136,320 acres
●				
◑	100%			2%
○				
⌽		100%	100%	98%
⊕				
Chicago Valley Mesquite	9,600 acres	9,600 acres	9,600 acres	9,600 acres
Thicket				
●				100%
◑	100%	73%	73%	
○				
⌽		27%	27%	
⊕				

Special Habitat Areas (Cont)	No Action	Protection	Balanced	Use
East Sierra Canyons	121,600 acres	121,600 acres	121,600 acres	121,600 acres
1 Highly negative ●		3%	8%	16%
2 Negative ◑	8%	20%	27%	29%
3 No substantial impact ○	92%	75%	65%	54%
4 Positive ⌽		3%		1%
5 Highly positive ⊕				
Superior Valley Joshua	102,400 acres	102,400 acres	102,400 acres	102,400 acres
Tree Woodland				
●		38%	43%	54%
◑	100%	52%	56%	45%
○		9%		
⌽			1%	1%
⊕				
Ord Mountains Jojoba	5,760 acres	5,760 acres	5,760 acres	5,760 acres
Scrub				
●				100%
◑	100%	100%	100%	
○				
⌽				
⊕				
Morongo Canyon Pinyon-	12,160 acres	12,160 acres	12,160 acres	12,160 acres
Juniper Woodland				
●			42%	42%
◑		21%	58%	58%
○	100%	79%		
⌽				
⊕				
Big Morongo Canyon	2,560 acres	2,560 acres	2,560 acres	2,560 acres
●				
◑				
○	100%			
⌽		100%	100%	100%
⊕				
Granite Mountains	48,000 acres	48,000 acres	48,000 acres	48,000 acres
●				8%
◑		28%	99%	92%
○	100%	72%	1%	
⌽				
⊕				

Table EC - 6 (cont.)

SIGNIFICANT IMPACTS ON SPECIAL HABITAT AREAS BY ALTERNATIVE

Amount of habitat affected and relative degree of impact

Special Habitat Areas (Cont	No Action	Protection	Balanced	Use
Pisgah Lava Flow	16,680 acres	16,680 acres	16,680 acres	16,680 acres
1 Highly negative ●		27%	81%	81%
2 Negative ◑	100%	58%	19%	19%
3 No substantial impact ○		15%		
4 Positive ⦶				
5 Highly positive ⊕				
Stepladder Mountains Teddy Bear Cholla Thicket	28,800 acres	28,800 acres	28,800 acres	28,800 acres
●				
◑	19%			100%
○	81%		100%	
⦶		100%		
⊕				
Chemehuevi Wash	332,800 acres	332,800 acres	332,800 acres	332,800 acres
●				27%
◑	70%	2%	20%	65%
○	30%	74%	76%	8%
⦶		24%	4%	1%
⊕				
Cadiz Dunes	38,400 acres	38,400 acres	38,400 acres	38,400 acres
●	4%	12%	100%	100%
◑	38%	88%		
○	58%			
⦶				
⊕				
Cima Dome	54,400 acres	54,400 acres	54,400 acres	54,400 acres
●		5%	5%	41%
◑		95%	95%	51%
○	100%			
⦶				
⊕				
New York Mountains	70,400 acres	70,400 acres	70,400 acres	70,400 acres
●				99%
◑				1%
○	100%	100%	100%	
⦶				
⊕				

Special Habitat Areas (Cont	No Action	Protection	Balanced	Use
East Cronese Lake	5,760 acres	5,760 acres	5,760 acres	5,760 acres
1 Highly negative ●				89%
2 Negative ◑	100%			11%
3 No substantial impact ○		100%	100%	
4 Positive ⦶				
5 Highly positive ⊕				
Vidal Wash	76,800 acres	76,800 acres	76,800 acres	76,800 acres
●	10%	8%	9%	71%
◑	59%	50%	81%	26%
○	31%	17%	5%	
⦶		26%	5%	3%
⊕				
Whipple Mountains	28,800 acres	28,800 acres	28,800 acres	28,800 acres
●				
◑				22%
○	100%	100%	100%	78%
⦶				
⊕				
Avawatz Mountains	26,240 acres	26,240 acres	26,240 acres	26,240 acres
●	68%			10%
◑	32%		68%	90%
○		24%	32%	
⦶		76%		
⊕				
Ford Dry Lake	5,760 acres	5,760 acres	5,760 acres	5,760 acres
●			11%	100%
◑	100%	44%	56%	
○		56%	33%	
⦶				
⊕				
Chuckwalla Bench	83,200 acres	83,200 acres	83,200 acres	83,200 acres
●				23%
◑	41%	3%	34%	77%
○	59%	88%	66%	
⦶		8%		
⊕				

Table EC - 6 (cont.)

SIGNIFICANT IMPACTS ON SPECIAL HABITAT AREAS BY ALTERNATIVE

Amount of habitat affected and relative degree of impact

Special Habitat Areas (Cont)	No Action	Protection	Balanced	Use
Milpitas Wash	150,400 acres	150,400 acres	150,400 acres	150,400 acres
1 Highly negative ●			8%	12%
2 Negative ◑	98%	69%	89%	84%
3 No substantial impact ○	2%	24%	3%	4%
4 Positive ⦶		7%		
5 Highly positive ⊕				
Palo Verde Mountains Saguaro	1,920 acres	1,920 acres	1,920 acres	1,920 acres
●				33%
◑	100%	100%	100%	67%
○				
⦶				
⊕				
Indian Wash	29,440 acres	29,440 acres	29,440 acres	29,440 acres
●	27%			17%
◑	73%	54%	80%	83%
○		46%	20%	
⦶				
⊕				
Pinto Wash	3,840 acres	3,840 acres	3,840 acres	3,840 acres
●				33%
◑		50%	100%	67%
○	100%	50%		
⦶				
⊕				
Smuggler's Cave Southern Chaparral	4,480 acres	4,480 acres	4,480 acres	4,480 acres
●				
◑		29%		100%
○	100%		71%	
⦶		71%	29%	
⊕				
Midland Ironwood Thicket	43,520 acres	43,520 acres	43,520 acres	43,520 acres
●	4%			4%
◑	96%	29%	43%	96%
○		16%	26%	
⦶		54%	31%	
⊕				

Special Habitat Areas (Cont)	No Action	Protection	Balanced	Use
McCoy Wash	20,480 acres	20,480 acres	20,480 acres	20,480 acres
1 Highly negative ●	79%		78%	91%
2 Negative ◑	21%	72%	22%	9%
3 No substantial impact ○		28%		
4 Positive ⦶				
5 Highly positive ⊕				
Palm Oases	5,120 acres	5,120 acres	5,120 acres	5,120 acres
●				63%
◑	86%	100%	100%	38%
○	14%			
⦶				
⊕				
Santa Rosa Mountains	105,600 acres	105,600 acres	105,600 acres	105,600 acres
●				
◑				
○	100%	2%	7%	11%
⦶		98%	93%	89%
⊕				
Southern Algodones Dunes	90,880 acres	90,880 acres	90,880 acres	90,880 acres
●	100%		4%	100%
◑		52%	79%	
○			16%	
⦶		48%	1%	
⊕				
Picacho Land and Wildlife Management Area	85,760 acres	85,760 acres	85,760 acres	85,760 acres
●			1%	
◑	65%	31%	64%	99%
○	35%	66%	34%	1%
⦶		4%		
⊕				
Cerro Coso Collage RNA[1]	3,000 acres	3,000 acres	3,000 acres	3,000 acres
●			100%	100%
◑		100%		
○	100%			
⦶				
⊕				

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[1] RNA - Research Natural Area

Table EC - 6 (cont.)
SIGNIFICANT IMPACTS ON SPECIAL HABITAT AREAS BY ALTERNATIVE
Amount of habitat affected and relative degree of impact

Special Habitat Areas (Cont)	No Action	Protection	Balanced	Use
Fremont RNA	6,000 acres	6,000 acres	6,000 acres	6,000 acres
1 Highly negative ●				
2 Negative ◑	100%		100%	100%
3 No substantial impact ○		100%		
4 Positive ⦶				
5 Highly positive ⊕				
Lava Beds-Cinder Cones ONA[2]	60,000 acres	60,000 acres	60,000 acres	60,000 acres
●		5%	2%	91%
◑		51%	89%	
○	100%	35%		
⦶				
⊕		9%	9%	9%
Cima Dome ONA	19,000 acres	19,000 acres	19,000 acres	19,000 acres
●		13%	13%	43%
◑		87%	87%	57%
○	100%			
⦶				
⊕				
[2] ONA - Outstanding Natural Area				
Castle Park-Indian Spring ONA	3,000 acres	3,000 acres	3,000 acres	3,000 acres
●				100%
◑				
○	100%	100%	100%	
⦶				
⊕				
Woods Mountains ONA	10,000 acres	10,000 acres	10,000 acres	10,000 acres
●			88%	88%
◑		88%	13%	13%
○	100%	13%		
⦶				
⊕				
Wild Horse Canyon ONA	3,000 acres	3,000 acres	3,000 acres	3,000 acres
●				80%
◑		100%	60%	20%
○	100%		40%	
⦶				
⊕				

Special Habitat Areas (Cont)	No Action	Protection	Balanced	Use
Granite Mountains RNA	5,000 acres	5,000 acres	5,000 acres	5,000 acres
1 Highly negative ●				
2 Negative ◑			40%	70%
3 No substantial impact ○	100%	100%	60%	30%
4 Positive ⦶				
5 Highly positive ⊕				
Turtle Mountains (Vehicle Closure Area)	65,000 acres	65,000 acres	65,000 acres	65,000 acres
●	5%			23%
◑				29%
○	95%	17%	2%	
⦶		83%	98%	47%
⊕				
Salton Sea Shoreline Habitat (SMA)[3]	10,000 acres	3,200 acres	1,920 acres	1,920 acres
●	90% (disposal)			100%
◑	10%	100%	100%	
○				
⦶				
⊕				
[3] SMA - Special Management Area				
Carrizo Wash (SMA)	5,000 acres	5,000 acres	5,000 acres	5,000 acres
●				
◑		80%	80%	80%
○	100%			
⦶				
⊕		20%	20%	20%
Fish Creek Mountains Primitive Area (SMA)	13,000 acres	13,000 acres	13,000 acres	13,000 acres
●	25%			
◑		22%	22%	100%
○	75%			
⦶		78%	78%	
⊕				
Coyote Mountains Primitive Area (SMA)	16,000 acres	16,000 acres	16,000 acres	16,000 acres
●			8%	24%
◑		24%	72%	76%
○	100%			
⦶		76%	20%	
⊕				

Table EC - 6 (cont.)

SIGNIFICANT IMPACTS ON SPECIAL HABITAT AREAS BY ALTERNATIVE

Amount of habitat affected and relative degree of impact

Special Habitat Areas (Cont)	No Action	Protection	Balanced	Use
Signal Mountain RNA	1,000 acres	1,000 acres	1,000 acres	1,000 acres
●				
◑			100%	100%
○	100%	100%		
⦶				
⊕				
Coyote Wash (SMA)	6,300 acres	6,300 acres	6,300 acres	6,300 acres
●	100%	20%		20%
◑		60%	100%	80%
○		10%		
⦶		10%		
⊕				
Ocotillo Valley (SMA)	4,000 acres	4,000 acres	4,000 acres	4,000 qcres
●				33%
◑		100%	100%	67%
○	100%			
⦶				
⊕				
Palin Canyon Wash (SMA)	4,000 acres	4,000 acres	4,000 acres	4,000 acres
●	10% (disposal)			
◑		100%	100%	100%
○	90%			
⦶				
⊕				
Crucifixion Thorn Thicket (UCA)	<1,000 acres	<1,000 acres	<1,000 acres	<1,000 acres
●				
◑				100%
○	100%			
⦶		100%	100%	
⊕				
In-ko-Pah/Jacumba Primitive Area (SMA)	30,000 acres	30,000 acres	30,000 acres	30,000 acres
●				
◑		6%		89%
○	100%		6%	11%
⦶		94%	94%	
⊕				

	No Action	Protection	Balanced	Use
Yuha Wash (SMA)	4,000 acres	4,000 acres	4,000 acres	4,000 acres
1 Highly negative ●				86%
2 Negative ◑		29%	86%	
3 No substantial impact ○	100%	14%		
4 Positive ⦶		57%	14%	14%
5 Highly positive ⊕				
Yuha Basin Wash (SMA)	4,000 acres	4,000 acres	4,000 acres	4,000 acres
●				71%
◑		29%	71%	
○	100%	14%		
⦶		57%	29%	29%
⊕				
Pinto Wash to Mexican Border (UCA)	8,000 acres	8,000 acres	8,000 acres	8,000 acres
●				60%
◑			100%	40%
○	100%	100%		
⦶				
⊕				
Sacramento Mountains Cholla Habitat	10,240 acres	10,240 acres	10,240 acres	10,240 acres
●				38%
◑	40%	38%	88%	38%
○	60%		13%	
⦶		63%		25%
⊕				
●				
◑				
○				
⦶				
⊕				
●				
◑				
○				
⦶				
⊕				

Cultural Resources / Native American Values

■ No Action. Adverse impacts to known and predicted cultural and Native American resources and values would continue. An estimated 112 resource areas (out of 188) of very high sensitivity and 158 resource areas of high sensitivity (out of 237) would be adversely impacted and, in many cases, completely destroyed. Although the greatest direct impact would occur to surface sites, as much as 40 percent of the area having good potential for buried sites could be impacted over the next 20 years. The reactive nature of management under this alternative would result in the greatest relative impact to cultural resources and Native American values.

* * *

■ Protection Alternative. The Protection Alternative would incorporate 96 percent of the known and predicted historic resources, approximately 95 percent of the known and predicted prehistoric resources, and 97 percent of the identified Native American sensitivity areas within classes C and L. This alternative provides the most favorable context for the preservation, protection, restoration, and stabilization of cultural resources.

* * *

■ Balanced Alternative. Under the Balanced Alternative, approximately 58 percent of the known historic and 57 percent of the known and predicted prehistoric material cultural resources would receive protection under Class C and L multiple use class guidelines. Forty-two and 43 percent of known and predicted cultural resources are within Class M and I, respectively, where there is a much higher potential for negative impacts. Many resource types in classes C and L occur in the desert hills and uplands. Many of the material resources located in and along the playas and sinks occuring in classes M and I will be lost through permissable activities (e.g., ORV play, grazing, mining, etc.). About 79 percent of the identified areas of Native American traditional value occur within classes C and L. Although specific impacts and resource concerns vary among the groups contacted, highly sensitive areas fall within classes C and L in the majority of cases, irrespective of ethnic affiliation.

■ Use Alternative. Under the Use Alternative approximately 74 percent of the historic material resources and 76 percent of the prehistoric resources (both known and predicted) would be exposed to impacts and possible destruction within classes M and I. Sixty-one percent of the identified Native American sensitivity areas would also be exposed to destruction and desecration by allowable activities.

The following tables summarize the cumulative impacts of all elements on cultural resources and Native American values.

Table EC-7

IMPACTS ON KNOWN AND PREDICTED CULTURAL AND NATIVE AMERICAN RESOURCES

Percentage of Historic Resources Susceptible to Impacts by Class	Protection (Percent)	Balanced (Percent)	Use (Percent)
Class C	36	24	9
Class L	60	35	18
Class M	3	38	58
Class I	1	3	15
TOTAL:	100	100	100
Percentage of Prehistoric Resources susceptible to Impacts by Class			
Class C	35	23	8
Class L	60	35	17
Class M	4	39	60
Class I	1	3	15
TOTAL:	100	100	100
Percentage of Native American Resources susceptible to Impacts by Class			
Class C	54	36	8
Class L	43	43	31
Class M	2.5	18	57
Class I	.5	3	4
TOTAL:	100	100	100

Table EC-8

AREAS OF KNOWN AND PREDICTED CULTURAL RESOURCES AT JEOPARDY

Under the No Action Alternative

Resource Sensitivity	Comparable Management Guidelines			Total Sites
	Limited Use (L)	Moderate Use (M)	Intensive Use (I)	
Very High	76 [a]	102	10	188
High	92	144	14	237

[a] Figures are for the number of areas in jeopardy in each multiple use class for the No Action Alternative.

Wilderness

■ No Action. None of the 138 wilderness study areas (5.7 million acres) would be designated in this alternative. Wilderness values in those areas would be vulnerable to impairment.

■ Protection Alternative. The Protection Alternative would afford full wilderness value protection to 89 percent of the areas with identified wilderness values, leaving 600,000 acres undesignated.

■ Balanced Alternative. The Balanced Alternative would provide wilderness values protection for 31 percent of the potential wilderness areas, leaving nearly 4 million acres undesignated.

■ Use Alternative. Of the three action alternatives, the Use Alternative provides the least protection of wilderness values with 6 areas protected, leaving approximately 5 million acres or 91 percent of the wilderness study areas undesignated.

In each action alternative, possible acquisition of non-BLM lands located within the boundaries of proposed wilderness areas may be necessary for management of these areas and to ensure protection of wilderness values.

Table EC-9

SIGNIFICANT IMPACTS ON WILDERNESS BY ALTERNATIVE

Key Issues	No Action	Protection	Balanced	Use
Acres not protected by Wilderness Designation which possess wilderness values identified in the inventory phase	5,700,000	500,000	3,900,000	5,100,000
Percentage of Total Not Protected	100	11	69	91
Number of WSAs Not Protected	138	29	100	132
Acreage proposed for acquisition to provide additional protection of wilderness values and improve management (acres)	0	764,000	272,000	26,000
Percentage of total wilderness acreage	0	12	12	4

Visual Resources

The No Action and Use Alternatives would adversely impact visual resources due to the extent of impacts from the Energy and Utilities, Minerals Exploration and Development, and Motorized Vehicle Elements. The summary table of potential visual impacts shows this. Visual impacts could occur in areas where visual resource values have been inadequately protected, i.e. where multiple use classes would allow actions at a level of development greater than the management guidelines for the visual resource values would allow. This table shows that widely varying fractions of the CDCA would be subject to visual impacts, depending upon the alternative.

The summary table of potential visual impacts also indicates the percentages of visual resource values which would be excessively, inadequately, or appropriately protected from a visual values perspective. An example of excessive protection would be an area of low visual resource value with a Class L designation which carries with it visual resource management guidelines appropriate for areas of high visual resource value. Of course, multiple use class designations are designed to encompass many more resource protection and use considerations than visual values.

Areas proposed for wilderness designation have been tallied under the "appropriately protected" column of Table EC-10. Since not all wilderness has high visual value in terms of quality, susceptibility or viewability, the distribution between "overprotection" and "appropriate protection" for visual values may be slightly skewed in the Balanced and Protection Alternatives.

This table compares the amounts of the CDCA which could be visually impacted from resource management actions in each alternative. The degree of visual impact is either significant (S) or very significant (VS), depending upon the degree of divergence between the appropriate and allocated multiple use class designations. Numbers under the "Visual Impact" columns are percentages of total CDCA lands.

Table EC-10

PERCENTAGE OF THE CDCA VISUALLY IMPACTED

Alternative	Visual Impact			Protection		
	S	VS	Total	Under	Over	Appropriate
No Action	24	2	26	26	31	43
Use	28	4	32	32	21	47
Balanced	10	1	11	11	35	54
Protection	3/4	1/4	1	1	38	61

The following table lists areas which would be subject to visual impacts summarized in the preceding table. Figures given under each alternative represent the percentage of the area of potential impact that would actually be impacted under that alternative. The degree of impact is either significant or very significant depending upon the degree of divergence between appropriate and assigned multiple use classes for the visual resource values. Very significant impacts are indicated parenthetically in the table (e.g., 20(+2) indicates 20 percent significantly impacted plus 2 percent very significantly impacted).

Table EC - 11

VISUAL IMPACTS BY PLAN ALTERNATIVE

Area Name	Acres Potentially Impacted	No Action (percent)	Protection (percent)	Balanced (percent)	Use (percent)
1 Deep Springs	25,000	95			55
2 Eureka Valley	172,160	100		10	25
3 Last Chance Range	141,440	100		5	50
4 Saline Valley	1,920				100
5 Saline Dunes	78,080				100
6 Inyo Mountains	164,480	96	5	10(+2)	20(+2)
7 Santa Rosa Hills	29,440			45	100
8 Panamint Springs	65,280			5(+2)	90(+10)
9 Sugarloaf Mountain	48,000	75(+25)		50	60
10 Argus Range	62,080	85			100
11 Panamint Valley	118,000	90(+10)		40	90(+2)
12 Panamint Mountains	123,520	100			15
13 Ballarat	3,840	100			
14 Trona	13,440			100	100
15 Pinnacles	6,400				100
16 Spangler Hills	67,200	98(+2)		90(+10)	92(+8)
17 El Paso Mountains	9,600				100
18 Garlock	59,520	40(+2)	5	5	100
19 Butterbredt Canyon	78,720	5(+10)		10	90(+10)
20 Cache Peak	17,280				100
21 Sageland	1,280				100
22 Owens Peak	640				100
23 Haiwee Reservoir	55,040	50		30	90(+10)
24 Portuguese Canyon	4,480	100			
25 Rand Mountains	17,280	100		5	100
26 Red Mountain	39,680	100	5	50(+5)	60(+40)
27 Fremont Peak	24,960	100	10	100	100
28 Rainbow Basin	16,000	100		5	100
29 Lane Mountain	1,920	100		100	100
30 Calico Mountains	21,120	10	5	10	100
31 Ord Mountains	93,440	80		45	80(+20)
32 Rodman Mountains	87,680	98(+2)		20	20(+20)
33 Iron Ridge	3,840	100			100
34 Fry Mountains	44,160	98	95	80	100
35 Lucerne Valley	27,520	95	15	35	80(+20)
36 Fairview	1,920	100			100
37 Negro Butte	3,200			20	60
38 Warner Dry Lake	640				100
39 Round Mountain	2,560	100		100	100
40 Giant Rock	23,040	40			70(+30)
41 Ludlow	57,600	10	5	15	95(+5)
42 Old Dad Mountains	59,520	90		85	96(+4)
43 Saltus	1,920	100		100	100
44 Amboy Crater	4,520	100			100
45 Granite Mountains	3,840				100
46 Bristol Mountains	10,880				100

Table EC - 11 (cont.)

VISUAL IMPACTS BY PLAN ALTERNATIVE

Area Name	Acres Potentially Impacted	No Action (percent)	Protection (percent)	Balanced (percent)	Use (percent)
47 Afton Canyon	80,640	40		25	60(+40)
48 Devils Playground	176,000	40		5	66(+34)
49 Baker	13,440	100		5	100
50 Silurian Valley	135,680	95(+5)	(3)	93(+2)	97(+3)
51 Avawatz Mountains	13,440	100			
52 Owlshead Mountains	37,760	100			
53 Excelsior Mine Road	58,240	40		25	100
54 Chicago Valley	151,680	90	3	30(+15)	65(+35)
55 Nopah Mountains	58,880	85(+15)		20	15(+20)
56 Resting Springs Range	40,320	100			
57 Greenwater Range	91,520	100			75
58 Amargosa River	120,960	100		50	80
59 Funeral Mountains	35,200	100		15	
60 Ryan	11,520	100	50(+5)	45(+55)	45(+55)
61 Shadow Valley	19,840	100			
62 Clark Range	25,600	100			
63 Valley Wells	96,000	100	(+5)	65(+5)	95(+5)
64 Ivanpah Mountains	48,640			90	100
65 Cima Dome	104,960				100
66 New York Mountains	106,880				100
67 Wood Mountains	96,000			20	100
68 Clipper Valley	52,480				100
69 Clipper Mountains	90,240				100
70 Marble Mountains	58,240	85		80	95
71 Piute Mountains	35,840	65			100
72 Sacramento Mountains	1,280			100	38
73 South Pass	1,920				100
74 Dead Mountains	40,960	(5)		50	100
75 Chemehuevi Mountains	90,880	100		5	15
76 Stepladder Mountains	41,600	50		35	100
77 Turtle Mountains	101,760	2(+10)		15	95
78 Sunflower Springs	640	100			
79 Old Woman Mountains	1,280	100			
80 Cadiz Valley	17,280	90		85	80
81 Sheephole Mountains	26,240	100			100
82 Dale	640				
83 Coxcomb Mountain	155,520	75	1	30	60(+5)
84 Savahia Peak	22,400	20(5)			80
85 Black Metal Wash	3,840				100
86 Blue Cloud Mountain	6,400			40	100
87 Earp	3,200				100
88 Vidal Valley	26,880	100		20	100
89 Big Maria Mtns	88,960	60(+35)		45	90
90 McCoy Wash	68,480	96(+4)		5	90(+10)
91 Chuckwalla Valley	261,760	60		10	90(+10)
92 Chuckwalla Mountains	144,640	5(+5)		25	80(+20)
93 Orocopia Mountains	71,040	30(+30)		30(+5)	40(+40)
94 Cottonwood Canyon	4,480	100		100	100
95 Cottonwood Mountains	2,040	100		100	100
96 Little San Bernardino Mountains	7,680	100		100	100
97 Indio Hills	21,120	100			
98 Pumpkin Patch	5,120				100
99 Ocotillo Badlands	2,560			50	100
100 Half Hill Dry Lake	640				100
101 Harpers Well	3,200				100
102 Fish Creek Mountains	4,480	60		75	75
103 Coyote Mountains	49,920	(5)		(25)	75(+25)
104 Yuha Basin	24,320	5		95	100
105 Vista DeAnza	1,920			75	100
106 Pinto Wash	640			100	100
107 Coyote Wash	128	100			
108 North Imperial Dunes	28,800	5(+60)			45(+55)
109 South Imperial Dunes	184,960	10(+90)	(15)	5(+20)	35(+65)
110 Cargo Muchacho	7,040	100			100
111 Picacho Peak	58,240	65(+25)		3	80(+5)
112 Black Mountain	63,360	80		10	95
113 Midway Well	47,360	95		20	100
114 Milpitas Wash	37,760	100		50	50
115 Iron Mountain	70,400	75(+25)		(7)	10(+10)
116 Senator Wash	640				100
117 Kelso	640	100			100
118 McCoy Peak	1,280	100			100

Recreation

In all three action alternatives, recreation requiring vehicle access for participation would be significantly changed from the present situation and No Action. A substantial reduction, 85 percent, in acreage of open areas occurs in the Protection Alternative. Opportunities and experience for ORV free play are reduced by 54 percent in the Balanced Alternative. The Use Alternative would provide an additional 6 open areas and an increase of 108 percent in total open area acreage.

An increase from present lands under the No Action Alternative in wilderness-oriented recreational opportunities and corresponding loss of opportunities dependent on vehicular access will result from wilderness designation in the three action alternatives. Areas closed to vehicular access increase in acreage 12 percent in the Use Altenrative, 216 percent in the Balanced Alternative, and 774 percent in the Protection Alternative. Table EC-12 provides more detail.

Table EC-12

SIGNIFICANT IMPACTS ON RECREATION BY ALTERNATIVE

Key Issue	No Action	Protection	Balanced	Use
Vehicle-oriented Recreation (ORV Free Play Opportunities):				
Acres of BLM-administered lands (000)	628	93	289	1306
Percentage of BLM-administered lands	5.2	.8	2.4	10.8
Percentage of change from No Action	-	-85	-54	+108
Change in number of open areas	14 Existing	-8	-1	+6
Other Recreation (Wilderness opportunities and loss of opportunities dependent on vehicular access):				
Acres closed to vehicular access (000)	605	5,284	1,914	679
Percentage of BLM-administered lands	5	43.6	15.8	5.6
Percentage of change from No Action	-	+774	+216	+12

Domestic Livestock Grazing

■ No Action. Continuation of present management would have few significant impacts on cattle or sheep. Recreational use would continue to cause occasional harrassment to livestock, and vandalism of range improvements would continue. Over 9,500 wild horses and burros would consume 115,000 AUMs of forage. The result would be a continuation of grazing at a level of 120,000 AUMs without major changes in distribution of grazing, grazing management intensity, or livestock production.

* * *

■ Protection Alternative. The Protection Alternative would adversely impact cattle though a 23 percent reduction in grazing, seasonal use restrictions on 843,000 acres, and forage competition from 1,110 burros and 70 wild horses. Cattle use on perennial rangelands would be 75,000 AUMs, a loss of 27,000 AUMs resulting in an estimated 3,500 head reduction. This reduction is not expected to result an equal reduction in beef production. A reduced level of grazing and the addition of 12 additional allotments would decrease forage competition among livestock. Increased weight gains and higher calf crops would result. These gains would not be sufficient to completely offset the loss of production from AUM reductions. Additional range improvements would better distribute livestock and allow more uniform use of the rangeland. Weather patterns would continue to be the dominant force in controlling forage production and animal performance.

Reductions in vehicle access, motorized vehicles open areas, and projected increases in ranger patrols would slightly decrease livestock harrassment and vandalism to range development.

Cancellation of grazing privileges under the No Grazing subalternative would result in the loss of all beef and lamb production on public lands in the CDCA.

The Protection Alternative imposes restrictions on grazing use on ephemeral ranges to accommodate other resources and resource uses. Grazing use is expected to be reduced by 20 percent and forage utilization of 50 percent more. Restricting the grazing season and forage utilization would significantly reduce the forage available for fattening lambs. The actual levels of authorized use are determined annually based upon forage production on ephemeral rangelands. Based on past use, up to 20,000 AUMs would be lost during "average" years.

■ Balanced and Use Alternatives. Impacts resulting from the Balanced and Use Alternatives are similar in nature to the Protection Alternative. The magnitude of impacts differs. In the Balanced Alternative 78,000 AUMs are authorized; in the Use Alternative 82,000 AUMs are authorized. These use levels are 19 percent and 13 percent below present use, respectively, and represent significant decreases in cattle numbers and production. Restrictions on spring range use are imposed on 530,000 acres in the Balanced Alternative and 33,000 acres in the Use Alternative. Forage competition from burro and horse populations is reduced under the Balanced Alternative (850 burros and 50 wild horses remaining) and Use Alternative (600 burros and 30 wild horses remaining), compared to the Protection Alternative. Impacts to cattle due to nonavailability of spring range and forage competition with burros and horses is therefore reduced. Range improvements would moderately compensate for the adverse impacts caused by the reductions and range use restrictions in the Balanced Alternative and almost totally compensate these impacts in the Use Alternative.

Impacts to sheep are less in the Balanced Alternative, since only 118,000 acres have major grazing restrictions, compared to 545,000 acres with such restrictions in the Protection Alternative. However, less limiting restrictions are placed on an additional 520,000 acres. In the Use Alternative, major restrictions in grazing affect 3,200 acres and less limiting restrictions affect 467,000 acres. Based on past use, about 8,000 AUMs would be lost under the Balanced Alternative, and 2,000 AUMs are lost under the Use Alternative. Annual forage production would dictate actual allowable grazing use levels.

Wild Horses and Burros

Wild horses and burros are reduced in all alternatives. They are reduced from 9,550 (8,800 burros and 750 horses) to 4,200 in the Protection Alternative, to 3,900 in the Balanced Alternative, and to 3,600 in the Use Alternative. Reductions would disrupt sex and age class structures, disrupt social behavior, and physically injure (to some degree) an estimated 2 percent of all animals handled. Placement of horses and burros under the Adopt-A-Horse and Adopt-A-Burro programs would result in about 5 percent being placed in unsuitable environments. Reductions in burro and horse numbers on the range would reduce competition for forage, water, and space. Burros and horses would improve their physical condition and continue to increase at about current rates.

Socioeconomic Values

There is little potential for affecting the economic growth of the CDCA except through restrictions on mineral development. BLM mineral development constraints under the Protection Alternative would probably become limiting to the industry by 1990. This effect could be great enough to be noticeable in the total CDCA economy at that time. These effects would increase by the year 2000.

▪▪ Minerals and Energy. The Balanced Alternative would be less limiting to mineral development and probably would not noticeably affect the overall CDCA economy before 2000, though the constraints would be noticeable within the mineral development sector as early as 1990.

The Use Alternative would increase mineral development opportunities, though this would probably have little effect on the economy, except through development of energy minerals in the CDCA, particularly oil and gas.

▪▪ Recreation. The plan alternatives would primarily affect visitors' choices of recreational activities rather than the overall level of visitation. The level of recreation would be in the range of 19 to 40 million visitor-use days for all of the alternatives, including No Action. Nonplan factors such as the condition of the national economy are expected to be determinants of the level of visitation.

The reduction in ORV activity in the Protection Alternative would reduce spending on the sport by an estimated 100 million dollars per year, mostly in the southern California metropolitan area. The effects would be noticeable in the ORV industry, but would not be noticeable in the area's overall economy.

If an East Mojave National Park were established, an additional one-half to one million visitor-use days could occur each year.

▪▪ Grazing. Livestock operators using perennial forage would have their forage allocations slightly reduced in the Balanced Alternative, moderately reduced in the Protection Alternative, and slightly reduced in the Use Alternative. Users of ephemeral forage, mostly sheep operators, would be restricted in both turnout dates and amount of forage removed. In poor forage growth years and, for some operators, average years, it would not be economical to graze these allotments. The greatest restriction occurs in the Protection Alternative and the least restriction occurs in the No Action Alternative.

If all existing grazing allotments were cancelled, 25 cattle operations would cease to function. About one-half of the sheep operators would cease business, and the others would have much less profitable operations.

The No Action Alternative would continue all allotments at existing forage allocations.

--Lifestyles. The alternatives would also affect people pursuing certain life styles. The No Action Alternative would permit continuance of existing life styles without major changes. The Protection Alternative would enhance the pursuit of the nature observation and research life styles, while distinctly diminishing the pursuit of the ORV, independent mining, and rockhounding lifestyles. Elimination of grazing would almost eliminate the ranching life styles in the CDCA. The Balanced Alternative would have less effect on life styles than the Protection Alternative, but the pattern would be similar. The Use alternative would enhance the ORV, independent mining, and rockhounding life styles, while somewhat diminishing the pursuit of the nature observation and research life style.

Table EC - 13

SIGNIFICANT SOCIOECONOMIC IMPACTS

Key Issues	No Action	Protection	Balanced	Use
ORV activity on BLM land in 2000 as of percentage of the 1978 level of the same activity.	98	57	88	117
Life-styles enhanced	None	Nature Observation and Research	Nature Observation and Research	ORV Rockhounding Independent Mining
Life-styles diminished	None	ORV Rockhounding Independent Mining	ORV Independent Mining	Nature Observation and Research
Number of BLM controlled power plant siting regions open to plant development.	3	1	3; all but 1 lack transmission corridor access.	4; all but 1 lack transmission corridor access.
Number of utility corridors included	Not applicable	15	20	28
Percentage of high potential wind power areas developable	57	10	27	57
Number of allotments which would become economically marginal or inoperable	0	3	2	0
Number of allotments subject to delay in livestock turnout dates	0	26	26	26
Percent change in livestock AUMs (perennial range)	0	-27	-12	+22
Number of allotments with livestock forage reduced by 15 to 67 percent (ephemeral range)	0	7	7	7
Amount of visitation to BLM lands in the CDCA. (VUDs in year 2000)	19 to 40 million VUD	19 to 40 million VUD	19 to 40 million VUD	19 to 40 million VUD
Amount of ORV use in year 2000 (VUDs in year 2000)	1.3 million VUD	0.8 million VUD	1.2 million VUD	1.5 million VUD
Potential value of mineral reserves where development would be extremely constrained.	$17.4 billion	$61.0 billion	$37.7 billion	$11.7 billion
Percent of potentially valuable energy mineral area where development would be extremely constrained.	33	92	50	14

C-2
Impacts of Plan Elements

The implementation of each element of the Desert Plan will have specific impacts on some or all of the major resource categories in the California desert. Impacts on the following resources are considered here: air quality, water resources, soils, vegetation, wildlife, cultural resources, Native American resources, visual resources, wilderness, wild horses and burros, domestic livestock, general and vehicle-oriented recreation, and socio-economic values. If a resource is not considered under a particular element, the impacts of the element on that resource are considered to be insignificant.

Table PE - 1

SUMMARY OF CULTURAL/NATIVE AMERICAN ELEMENT IMPACTS

Resource	No Action Alternative	Protection Alternative	Balanced Alternative	Use Alternative
Air	○	○	○	○
Water	○	○	○	○
Soil	○	○	○	○
Vegetation	○	○	○	○
Wildlife	○	⦶	⦶	○
Cultural	●	⊕	⦶	◑
Native American	●	⊕	⦶	◑
Wilderness	◑	○	○	○
Visual	○	○	○	○
General Recreation	○	○	○	○
Motorized Vehicle	○	○	○	○
Grazing	○	○	○	○
Burros	○	○	○	○
Social Factors	○	○	○	○
Economic Factors	○	○	○	○

• LEGEND •

- ○ No significant impact
- ⦶ Positive impact
- ⊕ Highly positive impact
- ◑ Negative Impact
- ● Highly negative impact

Note: The No Action Alternative assumes present BLM management, actual livestock use, and that wild horse and burro numbers will remain unchanged over the next 20 years (see page 31 of the plan for a more complete explanation).

The Protection, Balanced, and Use Alternative columns indicate impacts anticipated in the next 20 years when an alternative is compared against existing 1980 conditions.

IMPACTS OF THE CULTURAL RESOURCES/ NATIVE AMERICAN ELEMENT

All significant impacts attributed to cultural resources management provided for in the element are described below for each plan alternative.

⊙ On Water Resources. The construction of interpretive centers and the physical aspects of stabilization and restoration may potentially impact water resources. However, the specifications of these activities are not available. Thus, no impacts can be predicted.

⊙ On Soils. Under all alternatives the only possible soils impacts would involve access corridors and visitor centers within interpretive zones. Such impacts cannot be analyzed until specific plans are developed during Desert Plan implementation.

⊙ On Vegetation. Impacts on vegetation from implementation of this element are expected only where interpretive trails, archaeological digs, visitor centers, information stations, and other construction and high-use areas are proposed. Site-specific plans are needed to determine actual impacts.

⊙ On Wildlife. Management guidelines described in the Cultural Resources/Native American Element are generally protective and beneficial to wildlife resources. Limiting public access, fencing sensitive areas, and increasing surveillance would protect wildlife resources by reducing habitat degradation and wildlife losses caused through vandalism, wood-cutting, and other deleterious activities associated with recreation and other uses. Beneficial impacts to wildlife species and habitats would be greatest under the Protection Alternative and least under the Use and No Action Alternatives.

Although the management guidelines of the Cultural Resources/Native American Element will have a positive impact on wildlife species and habitats in general, several aspects of this element could have deleterious impacts on wildlife resources. Mitigation and research techniques, such as rodent control or excavations using heavy machinery (Davis 1978), would disrupt wildlife and destroy habitat. These disturbances are usually limited to small areas, but would be substantial when near an important water source, raptor eyrie, or other sensitive wildlife resource. Excavations of rock shelter/cave artifacts could have serious negative effects on specialized animals, such as bats and invertebrates. Strict protection of cultural resources near springs or in other areas would limit wildlife management programs, such as water source development or removal of undesirable exotic vegetation. Harvesting animals for use in Native American ceremonies could have significant deleterious effects on marginal, isolated, or declining populations. Harvesting native food stuffs could affect the food supply available to wildlife if done too intensively, especially in drought years.

⊙ On Cultural/Native American Resources. A number of impacts to the cultural resources and values within the California desert can be anticipated with the implementation of the Cultural Resources/Native American Element under the California Desert Plan. These impacts are largely an aspect of the structure and constraints of specific resource management under the various multiple use class guidelines, and reflect the underlying multiple use emphasis of the plan's design.

Under the No Action Alternative, activities affecting cultural/Native American resources and values are treated on a case-by-case basis. Thus, the specific effects and affects on cultural/Native American resources and values will vary considerably, reflecting specific management decisions. Project specific environmental analysis will provide management with the data necessary to make informed decisions. However, there is no coordinated or consistent cultural resource/Native American program under this plan alternative. Ideally, all permitted actions would conform to review and management procedures consistent with 36 CFR 800 guidelines.

The variation in the cultural resource/Native American Element guidelines under the other plan alternatives reflects the relative proportions of the various multiple use class designations under each action alternative. Management guidelines for protection of cultural resources and values differ by multiple use class. Classes C and L provide an opportunity for positive action to stabilize and protect cultural resources and values. Classes M and I, respectively, are oriented to allow more consumptive use and provide primarily for mitigation of damage or destruction occurring in association with permissible uses.

In general, the Protection Alternative provides the greatest protection of cultural/Native American resources and values. Under this alternative 97 percent of the known and predicted resource sites occur within classes C and L. Comparable figures for the Balanced and Use Alternatives are 42 percent and 21 percent, respectively. The relatively larger percentages to cultural/Native American resources reflect the far greater percentages of land occurring in classes M and I under the Balanced and Use alternatives. Given the reactive and mitigative guidelines within these classes it can be anticipated that the majority of cultural/Native American resource occurring within classes M and I will be adversely affected and possibly destroyed during the twenty-year management period of the California Desert Plan.

⊙ On Visual Resources. No direct impacts on visual resource values would occur.

⊙ On Wilderness. The No Action Alternative of the Cultural Resources/Native American Element would result in continued degradation of cultural resources which contribute to wilderness values. There would be no significant impacts on wilderness values in designated wilderness areas under any of the alternatives.

⊙ On Domestic Livestock. Thirty-one livestock grazing allotments have at least one sensitive cultural site, and 23 allotments have a proposed ACEC within them, designed to protect cultural resources. Protection of cultural resources would slightly reduce forage availability, but the overall impact of this would not be significant.

⊙ On General Recreation. Cultural resource management would be implemented on a case-by-case basis under the No Action Alternative by applying the requirements of existing laws and policies to proposed projects. Adverse impacts on recreational opportunities and experiences would occur on a site-by-site basis, e.g., restrictions on vehicle assess and relocation of project sites.

In classes C and L, control of public access and specific limitations on use and development would be used to protect cultural and Native American resources. Therefore, adverse impacts to recreational opportunities and experiences associated with either vehicular access or recreational development would occur where conflicts with sensitive cultural/Native American values exist.

Because management of cultural resources and Native American values would be accomplished consistent with the multiple use class guidelines, and because the Balanced Alternative would provide a mix of recreational opportunities and experiences, no significant impacts on recreation resource would be expected.

The thrust of the Use Alternative would be towards resource use with a minimum of restrictions. Therefore, the major tools for cultural and Native American resource protection would be through applicable laws and policies and through the use of various interpretive and educational techniques. This would have a beneficial impact on the Environmental Awareness program.

Impacts to recreation from cultural resource management would be insignificant desertwide.

◉ On Vehicle-oriented Recreation. A slight possiblity for impacts to free play, vehicle touring, trailriding, exploring, and competitive use would exist should unknown cultural resources or Native American values be discovered and require protection. There would be a slight impact on the satisfaction level of competitive vehicle use. These impacts would involve inconvenience to promoters or reduction in participant challenge as a result of course modifications necessitated to avoid cultural resources.

Impacts on vehicle-oriented recreation from this element under the Protection, Balanced, and Use Alternatives would be slight and would become less significant as the alternatives become less restrictive.

Under the Protection Alternative, opportunities for vehicle touring, trailriding, and exploring would be lost in areas where such use conflicts with special cultural resources and Native American management zones. These special management zones would call for controlled access to sites in Multiple Use Class L.

Where vehicle access is limited to protect cultural resources or Native American values, vehicle-oriented recreational experiences would be diminished. It would not be possible to observe these cultural resources by travelling to them by motorized vehicle. Free play and competitive use experiences would be diminished should mitigative measures employed to protect cultural resources require further limiting of these uses or relocating courses. However, desertwide there would be no significant impact on vehicle-oriented recreation from the Cultural Resources/Native American Element.

◉ On Socioeconomic Values. The Cultural Resources/Native American Element would have only a slightly positive effect on socio-cultural values under the No Action and Use Alternatives, due to the small percentage of the resources which would receive direct protection. Under the Balanced and Protection Alternative there would be a positive effect on socioeconomic values. Material sites and tracts of land would receive protection for cultural, religious and scientific values. The net effect would be the preservation and interpretation of a wide range of historic and prehistoric sites and many areas of particular cultural sensitivity and value to native people and other ethnic minorities.

Table PE - 2

SUMMARY OF RECREATION ELEMENT IMPACTS

Resource	No Action Alternative	Protection Alternative	Balanced Alternative	Use Alternative
Air	○	○	○	○
Water	○	○	○	○
Soil	○	○	○	○
Vegetation	○	○	○	○
Wildlife	◑	⦶	◑	●
Cultural	●	⦶	◑	●
Native American	●	⦶	◑	●
Wilderness	◑	○	○	○
Visual	○	○	○	○
General Recreation	◑	◑	⦶	◑
Motorized Vehicle	○	●	○	⊕
Grazing	○	○	○	○
Burros	○	○	○	○
Social Factors	○	◑	○	○
Economic Factors	○	◑	○	○

• LEGEND •

○ No significant impact

⦶ Positive impact

⊕ Highly positive impact

◑ Negative Impact

● Highly negative impact

Note: The No Action Alternative assumes present BLM management, actual livestock use, and that wild horse and burro numbers will remain unchanged over the next 20 years (see page 31 of the plan for a more complete explanation).

The Protection, Balanced, and Use Alternative columns indicate impacts anticipated in the next 20 years when an alternative is compared against existing 1980 conditions.

IMPACTS OF THE RECREATION ELEMENT

Recreation facilities and use provided for in this element would pose potential impacts on the environment. The impacts of motorized vehicle use and wilderness are considered separately. The following pages indicate the significant impacts which would result from implementation of this element in each plan alternative.

◆ On Water Resources. The exact nature, extent, and intensity of impacts, primarily around recreational facilities, cannot be predicted until the details of such development and use are proposed on a case-by-case basis.

◆ On Soils. The Recreation Element would have a negative localized impact on soils. Soils would be impacted by the development of visitor management services and facilities, as well as by the concentrated use they would induce. Precise impacts, however, cannot be predicted until the details of such development are proposed on a case-by-case basis.

◆ On Vegetation. Under the No Action Alternative, the vegetation in two campgrounds, in three unique plant assemblages, and in the habitats of eight Rare, Threatened, or Endangered species would continue to be impacted by general recreational activities.

Adverse impacts are also expected under the Protection Alternative from the construction of contact stations, campgrounds, picnic areas, and trails. From these types of activities, 14 unique plant assemblages (UPA's) and 41 Rare, Threatened, or Endangered plant populations could be impacted.

Construction activities under the Balanced Alternative could impact on 12 UPAs and 56 populations of Rare, Threatened, or Endangered plants. The extent and degree of impacts would be determined by final site locations design and prescribed mitigative measures.

Under the Use Alternative, impacts could occur to 16 UPAs and 43 populations of Rare, Threatened, or Endangered plants.

If the East Mojave is designated as a National Park, six of the eight herd management areas involved would have all burros removed, and the other two would have 40 and 60 percent removal. Seven grazing allotments would be eliminated and 15-35 percent of the remaining four allotments would be affected within park boundaries. Approximately 32,000 AUMs would be unavailable for livestock use. Effects on vegetation would tend to be positive because of burro and livestock removal which would eliminate the primary causes of vegetation modification.

◆ On Wildlife. There are many forms of recreation that have both positive and negative impacts on wildlife resources. These include, but are not limited to, bird watching, camping, picnicking, equestrian use, falconry, hiking, rockclimbing, photography, rock and mineral collecting, sightseeing, target shooting, hunting, sand sailing, and hang-gliding.

The impacts of general recreation on wildlife species and habitats will vary according to access by the public, and with effectiveness of visitor education and control. The above noted activities have the least impact when recreation use is at low levels and is carefully controlled. Greatest negative impacts would occur with the Use Alternative which provides extensive vehicular access throughout the desert; 80 percent of the CDCA is categorized as open to motorized vehicles or designated as existing roads and ways in this alternative. No Action is next with 66 percent of the CDCA in high access categories, followed by the Balanced Alternative with 42 percent and the Protection Alternative with about 8 percent. The Protection Alternative will be the most positive alternative because of the relatively low percentage of vehicle use-oriented designated lands.

Birdwatching has few negative and several positive effects on wildlife. Benefits include collection of valuable information on bird populations, defense of wildlife habitat against degradation by a knowledgable public, and increased appreciation of natural environments and wildlife in general. Adverse impacts occur when rare or sensitive birds are disturbed by continued observation or photographic efforts and when recreationists disrupt nesting activities.

Camping and picnicking can have positive impacts similar to those listed for bird watching. Negative impacts are moderate but generally localized. Negative impacts include: destruction of vegetation by collecting firewood, mechanical injury or brush fires; trampling of soil and vegetation which reduces the quality of wildlife habitat, particularly in riparian or spring areas; water pollution; and general disturbance of wildlife, including breeding songbirds, raptors, and Bighorn Sheep. Impacts are often greatest in sensitive riparian habitats or oases where campers congregate near water and shade. Campers, hikers, backpackers, and equestrians (through repeated use of selected areas) can form trails which may encourage vehicle use.

Collecting animals, plants, rocks or other environmental features can degrade wildlife resources. Collection of animals by recreationists, students, or falconers has localized negative impacts on populations and habitat, especially in commonly used areas. Rock and mineral collecting have localized impacts through destruction of habitat, particularly where rock-dwelling species occur. Hunting, while providing seasonal recreational enjoyment and a source of state revenue used for the management of game species, also is a source of removal of animals and disturbance for non-target species. For example, hunting of game species such as jackrabbits can remove key prey for the Desert Kit Fox, a protected species. Hunting of doves and quail in a restricted riparian habitat can disrupt both resident and migratory bird use.

One of the most deleterious impacts comes from target shooters, plinkers, or hunters who shoot indiscriminately at wildlife resources (animals, cacti, shrubs, etc.). This kind of vandalism is prevalent throughout the desert and is a serious source of disturbance and loss to many wildlife populations. Impacts will be high with the Use Alternative and substantially lower with the Protection Alternative.

One very significant aspect of the Recreation Element, the creation of the Mojave National Park, would be highly beneficial to wildlife. National Park Service preservation and conservation policies include: the removal of wild horses and burros; elimination of grazing, indiscriminate hunting and shooting; and tight controls on mining. Burros, horses, and domestic livestock all contribute to overgrazing and fouling of water sources, both of which are detrimental to native wildlife populations. These animals also compete directly with native animals for resources.

More importantly, the entire area would be managed as an ecological unit, eliminating the problem of habitat fragmentation. This would be especially positive for Bighorn Sheep and large predators, such as the Mountain Lion and Bobcat. The proposed area would shelter 688,000 acres of habitat for sensitive species, such as the Golden Eagle and Desert Bighorn Sheep, and 465,000 acres of habitat for significant species, such as the Prairie Falcon. In all, 12 species of concern would be positively affected. Also, 277,000 acres of unique and/or valuable habitats in the Granite, Providence, and New York Mountains (as well as Cima Dome) would be protected. Finally, three ACECs would be positively impacted: Clark Mountain, Fort Piute, and Fort Soda. Beneficial impacts would be offset slightly by increased visitor use and the need to construct various facilities. However, these impacts would be localized and concentrated, unlike the current situation.

The other three park alternatives have not been evaluated since they are not being considered as potential parks by the National Park Service at this time.

◆ On Cultural and Native American Resources. A large proportion of the impacts to material cultural resources and areas of traditional Native American value result from recreational activities. Prehistoric and historic sites can be completely destroyed by vandalism and theft. Lyneis and Weide (1979) have identified vandalism as the most common form of damage at villages, petroglyph localities, and historic sites.

The context of cultural remains, many of which occur on the surface of the ground, is particularly sensitive to disturbance by recreational activities. Removal or movement of artifacts or features reduces the scientific value and information which can be systematically recovered from prehistoric and historic sites. Such adverse impacts can be precipitated in many cases by specific recreational programs. The designation of scenic routes can, for example, increase visitor use and thus increase the impact to material cultural resources and areas of traditional Native American value.

Recreational use may also contribute to the desecration of traditional Native American religious and ritual sites. In other contexts, areas of traditional hunting or gathering activities have been constrained or eliminated completely by the encroachment of recreational development and use (Bean 1979 pers. comm.).

One component of the Recreation Element could have a positive effect on the future of cultural resources and Native American values, i.e., educational and interpretive programs. In areas where restricted access and directed programs for resource protection are not possible or feasible, interpretive programs might prove a means of increasing public sensitivity and reducing intentional impacts to cultural resources.

◆ On Visual Resources. There will be no significant visual impacts from recreational facilities. The facilities are dispersed, small-scale, and located and constructed to be compatible with the surrounding landscape.

◆ On Wilderness. The No Action Alternative would result in continued degradation of wilderness values and opportunities throughout the CDCA. However, there would be no significant impact to wilderness values within designated wilderness areas as a result of any of the alternatives in the Recreation Element. Under all alternatives such values are provided maximum protection, although there are varying amounts of wilderness designated under each alternative.

◆ On General Recreation Itself. Because no formally designated wilderness areas would be created as a result of implementation of the No Action Alternative, no legislative protection would be afforded areas capable of providing wilderness experiences. Therefore, opportunities for primitive experiences would be extremely limited, creating negative impacts on wilderness oriented recreationists.

The Protection Alternative would place approximately 43 percent of the desert public lands in wilderness status, which closes the area to vehicular access. Those recreational opportunities and experiences relying on vehicular access would be negatively impacted. For those recreationists seeking primitive experiences, the Protection Alternative would provide more than enough resources.

If the East Mojave is transferred into NPS status, recreational opportunities would not be managed under multiple use. However, recreational opportunities under either management would likely not be affected to any great degree.

The Balanced Alternative would provide the full spectrum of recreational use in the California desert, a positive benefit. No significant negative impacts to recreation would occur.

Few opportunities for wilderness experiences would be provided in the Use Alternative, resulting in an adverse impact on wilderness-seeking recreationists. However, this impact would be somewhat offset by an increase in opportunities for recreation requiring vehicular access.

◆ On Socioeconomic Values. A range of possible future recreational use levels has been projected to reflect the uncertainty of future visitor use of BLM lands:

Table PE-3

PROJECTED VISITOR USE (MILLION VISITOR USE DAYS)

	1978	1980	1990	2000
High projection	15.4 observed	17	25	41
Low projection		16	18	19

The upper projection assumes growing affluence, better management of desert resources, and new desert attractions. The lower projection assumes growth at the same rate as projected population growth of southern California. The lower projections of visitor use appear to be more consistent with current trends in the economy. These projections apply to all of the plan alternatives because the choice of plan alternative is not expected to be a determining factor in overall visitor use of the desert, with the exception of the National Park option in the Protection Alternative.

The No Action Alternative would result in continuation of the present patterns of activities with the most popular being sightseeing and touring. Only two or three small communities would be dependent upon visitors to BLM lands for income. Most people going to the CDCA would continue to have the resort communities (such as Palm Springs) as their destination.

Under the Protection Alternative much less activity would be centered on ORV use. A small increase in people going to designated wilderness areas would occur, but this would be less than decreased ORV-oriented visitation. Wilderness users would be attracted to the San Gorgonio Wilderness in the San Bernardino National Forest, but they would also be drawn to the many new National Forest and National Park areas expected to be added to the Wilderness System.

This alternative would decrease the number of people pursuing life styles based on ORVs, rockhounding, and mining or prospecting. Life styles based on nature observation and research would be enhanced. Visitation to BLM-administered lands would tend to become increasingly centered on resorts and other operations which could furnish the necessary horses, equipment, and guides needed to visit large inaccessible areas.

The inclusion of a National Park in the Protection Alternative would add to visitation and economic activity in the Baker area. This would add perhaps five hundred thousand to one million visitor-use days per year by the year 2000. The greatest economic impact would be from the spending of National Park Service employees needed to manage the park.

Under the Balanced Alternative there would be some shifting from activities based on ORVs to more touring and sightseeing on roads. The overall effect on the economy of the CDCA would be very small. The nature observer and researcher life styles would be enhanced by the reduced conflicts with other desert users through wilderness designation and improved management of desert resources.

The Use Alternative would be particularly beneficial to people pursuing ORV, rockhounding, and small miner life styles. There would be increased visitation to the desert to pursue these activities. The major portion of total visitation would still be for sightseeing and touring, however. People pursuing a nature observer or researcher life style would be affected by the continued, relatively abundant access. This life style would increasingly be confined to smaller areas of the desert. Total use in this sort of activity would continue to increase from its small base in part due to increasing interest in desert environments, and in part due to more intensive management by BLM.

Table PE - 4

SUMMARY OF WILDERNESS ELEMENT IMPACTS

Resource	No Action Alternative	Protection Alternative	Balanced Alternative	Use Alternative
Air	○	⦶	⦶	○
Water	○	○	○	○
Soil	◑	○	○	○
Vegetation	○	○	○	○
Wildlife	●	⊕	⦶	○
Cultural	●	⦶	⦶	○
Native American	●	⦶	⦶	○
Wilderness	●	⊕	⦶	○
Visual	○	⊕	⦶	○
General Recreation	◑	◑	⦶	◑
Motorized Vehicle	○	●	◑	○
Grazing	○	○	○	○
Burros	○	○	○	○
Social Factors	○	◑	○	○
Economic Factors	○	◑	◑	○

• L E G E N D •

○ No significant impact
⦶ Positive impact
⊕ Highly positive impact
◑ Negative Impact
● Highly negative impact

Note: The No Action Alternative assumes present BLM management, actual livestock use, and that wild horse and burro numbers will remain unchanged over the next 20 years (see page 31 of the plan for a more complete explanation).

The Protection, Balanced, and Use Alternative columns indicate impacts anticipated in the next 20 years when an alternative is compared against existing 1980 conditions.

IMPACTS OF THE WILDERNESS ELEMENT

This element would have a significant impact when wilderness study areas in the CDCA are designated as wilderness by Congress. For purposes of impact assessment, potential impacts are attributable only to proposed wilderness area designations, with the exception of impacts to wilderness values *per se*. Here, the impacts of decisions not to propose designation are also evaluated.

On Air Quality. Wilderness designation is expected to have a positive effect upon air quality. The degree of beneficial impact is proportional to the amount of the CDCA which would be designated wilderness. Thus, all acreage in the No Action Alternative and most in the Use Alternative would have air quality impacts. The substantial wilderness in the Protection and Balanced Alternatives would have a slightly positive effect on air quality.

On Water Resources. Overall, wilderness designation is considered to have no impact on water resources in any of the alternatives.

On Soils. The limited uses allowed within wilderness areas would restrict many activities which impact the soil. The No Action Alternative with no wilderness areas would have a negative impact; other alternatives would have limited positive impacts in proportion to the amount of wilderness proposed, none of them significant in magnitude.

On Vegetation. Wilderness designation of specific areas within the CDCA could have a profound effect on the vegetation. The vegetation has been modified to various degrees by man-caused activities, i.e., motorized vehicles, livestock use, fire suppression, mining, etc. If these activities are reduced or eliminated, as through wilderness designation, then vegetation changes can be expected. These changes may include shifts in plant composition, frequency, and abundance. Whether these changes are positive or negative is dependent upon one's point of view. The most probable changes may include increases in perennial grasslands (see scenario of vegetation changes in the No Grazing Alternative), decreases in shrub densities, decreases in plant species that tolerate disturbance, and a possible increase in the frequency of range fires in upland areas (3,000 ft.).

On Wilderness Resources. None of the 138 separate areas covering 5.7 million acres would be legislatively protected under the No Action Alternative. Eventually these wilderness values would be lost.

The Protection Alternative of the Wilderness Element recommends designation of 108 separate areas with identified wilderness values covering 5.2 million acres. This alternative would provide protection for a broad range of terrains and environments; however, 0.5 million acres in 30 separate areas with identified wilderness values would not be designated. Many of these areas not recommended for wilderness status would fall into Class L areas where development is highly restricted. Although Class L does not afford the degree nor the permanence of protection afforded by wilderness status, many of the values identified in the wilderness inventory would, nevertheless, be protected.

The Balanced Alternative recommends designation for 39 separate areas totalling 1.8 million acres, but wilderness values in 99 areas covering 3.9 million acres would not be legislatively protected. These non-recommended areas would fall primarily into multiple use classes L and M with two small areas in Class I. These areas would be subject to various degrees of development resulting in degradation of identified wilderness values.

The Use Alternative recommends designation for 6 areas totalling 0.6 million acres. These areas are generally remote and inaccessible. One hundred thirty-two areas (totalling 5.1 million acres) which were identified during the inventory process as possessing wilderness characteristics would not be recommended for wilderness status. These areas fall into multiple use classes L, M, and I, and would be subject to varying degrees of development. Many wilderness values, especially those characteristic to the broad flat open spaces of the California desert, would be lost as a result of this alternative.

On Wildlife. Wilderness areas will have a highly beneficial impact on wildlife through preservation of habitats and restrictions on consumptive uses. Wildlife populations not being adversely affected should exhibit continued stability. The overall effect of the wilderness designation on wildlife populations will vary with alternative. Impacts would be most positive under the Protection Alternative where there are the greatest number of wilderness areas proposed. Impacts would be least positive under the No Action Alternative where no lands have been set aside as wilderness. In fact, population declines may be expected wherever utility and road construction, mineral exploration and development, intensive grazing, and ORV use occur .

Wildlife populations and habitats would be most beneficially affected under the Protection Alternative, with proposed wilderness areas covering 43 percent of BLM-administered lands in the CDCA. Numbers of wildlife species and habitats within one or more proposed wilderness areas would be higher in this alternative than in the No Action, Balanced, or Use Alternatives. Portions of the ranges of 6 listed Rare or Endangered species, 19 sensitive species, 23 significant species, and 30 habitats highly important to wildlife or of restricted occurrence receive positive impacts. As examples, this would include 1.5 million acres of Golden Eagle foraging area, 86 percent of Desert Bighorn Sheep concentration areas, and 84 percent of Desert Bighorn Sheep permanent range located within the California Desert Conservation Area. In addition to mountain ranges, proposed wilderness areas in the Protection Alternative would offer complete or partial protection to a variety of habitats and species present in desert valleys and dune systems.

Proposed wilderness would cover 15 percent of CDCA public lands in the Balanced Alternative. The 39 separate proposed wilderness areas for the most part would beneficially impact portions of the ranges of 1 listed species, 11 sensitive species, 17 significant species, and 8 habitats of critical importance to wildlife species or of limited distribution. As an example, this would include 687,000 acres of Golden Eagle foraging areas, 78 percent of the range of the Kingston Mountain Chipmunk, and 48 percent of Desert Bighorn Sheep concentration range, and 61 percent of Desert Bighorn Sheep permanent range located within the CDCA. Proposed wilderness areas in the Balanced Alternative favor more montane species and habitats and generally do not offer much protection for lowland species.

In the Use Alternative, proposed wilderness areas covering .6 million acres or 4.6 percent of the CDCA would completely or partially protect the ranges of 4 sensitive species, 7 significant species, and 4 habitats either critical to wildlife or which represent a community of limited distribution. This would include 361,000 acres of Golden Eagle foraging area, 61 percent of the range of the Kingston Mountain Chipmunk, 16 percent of all Desert Bighorn Sheep concentration range, and 22 percent of all Desert Bighorn Sheep permanent range in the CDCA. Proposed wilderness areas would be restricted to mountain ranges under this alternative, favoring some more montane species and habitats. Isolation of montane species populations may occur due to the widely scattered proposed wilderness areas and use-oriented classes separating them.

The benefits of wilderness designation to wildlife would be primarily limited to isolated populations of montane species and their habitats; this is especially true in the Balanced and Use Alternatives. Species present in desert valleys and dune systems, which would receive little or no protection from wilderness designation in any alternative, include the Mohave Ground Squirrel, Desert Tortoise, Andrews Dune Scarab Beetle, Coachella Valley Fringe-toed Lizard, and Flat-tailed Horned Lizard.

✪ On Cultural and Native American Resources. Wilderness areas have a potential for both positively and negatively effecting the cultural resource base. On the negative side, wilderness guidelines could preclude the scientific recovery of data through excavation or collection. The construction of signs, fences, or other techniques for the physical protection or interpretation of cultural resources are not consistent with wilderness management. The restriction of motorized vehicle access could both limit protective surveillance and restrict access to traditional sites by Native American elders incapable of reaching the areas on foot. Pedestrian use by recreationalists may also be anticipated to have both direct and indirect impacts on cultural resources resulting from the collection of cultural materials, accelerated erosion along trail systems, and ground disturbance associated with hiking and camping activities.

The elimination of consumptive uses from these areas will contribute to the preservation of historic and prehistoric site complexes and many areas of ongoing cultural value. Resources of continuing importance to Native Americans and geographically extensive archaeological and historic materials and systems would be preserved in a relatively undisturbed natural context.

The quantity and quality of cultural and Native American resources and values which will be protected under the wilderness designation varies substantially among the plan alternatives. This variation is reflected in the relative proportion of Class C under each alternative.

✪ On Visual Resources. There will be no significant impact under the No Action Alternative. There will be highly positive impacts under the Protection and under the Balanced Alternative but to a lesser degree. The Use Alternative would have no impact because of the small amount of wilderness allocated.

✪ On General Recreation. Because no designated wilderness areas are proposed in the No Action Alternative, limited protection would be afforded to areas capable of providing primitive wilderness experiences. Opportunities for primitive experiences would be confined to remote areas in classes L and M, thereby reducing opportunities for wilderness recreation.

The Protection Alternative would place 43 percent of BLM-administered land in the CDCA in wilderness. Those recreational opportunities and experiences relying on vehicular access would be negatively impacted. For those recreationists seeking primitive experiences, the Protection Alternative would provide more than enough opportunities.

The Balanced Alternative would provide recreational opportunities and experiences representing the full spectrum of recreation in the CDCA. Areas for wilderness experiences as well as areas for urban ORV free play experiences would be provided. No significant negative impact on recreation would be expected.

Few opportunities for wilderness experiences would be provided in the Use Alternative resulting in a negative impact on wilderness seeking recreationists.

✪ On Vehicle-oriented Recreation. Under the No Action Alternative there would be no impact to vehicle-oriented recreation.

Opportunities for vehicle-oriented recreation would be greatly restricted by the Protection Alternative. Under this alternative, 5.2 million acres would be closed to all vehicle use. Confining use to a few small areas would result in overcrowding, degradation of the recreational resource, increased user conflicts, loss of challenge, and boredom. Vehicle touring, trailriding, and exploring experiences would be greatly reduced since about 5 million acres of some of the most scenic and interesting lands with highly variable terrain would be closed to vehicle use.

In the Balanced Alternative opportunities for vehicle-oriented recreation would be lost on 1.8 million acres. Vehicle touring, trailbiking, and exploring experiences would also be reduced.

Vehicle-oriented recreational opportunities and experiences would not be significantly impacted under the Use Alternative of the Wilderness Element. The 602,000 acres of land allocated to wilderness in this alternative is primarily inaccessible mountainous terrain. Ample opportunities for quality recreational experiences would continue to exist even with this closure.

✪ On Socioeconomic Values. Recreational use of potential wilderness areas has taken place for many years and would continue to take place under the No Action Alternative. This component of visitation to the desert would continue to be insignificant relative to total use.

Visitation to the CDCA for wilderness experience would increase slightly under the Protection Alternative. Though some use would overflow from the San Gorgonio Wilderness in the San Bernardino National Forest, there would also be the counterbalancing effect of greatly increased wilderness designation in the National Forests, National Parks, and National Monument both in and adjacent to the CDCA. Increased visitor use resulting from wilderness designation of BLM-administered lands in the CDCA would not be significant.

Mineral exploration and development would be stringently restricted under the Protection Alternative. As a result, approximately 25 percent of the dollar value of the mineral reserves under BLM jurisdiction would be largely unavailable. The effect would be a limitation of the future potential of the CDCA as a source of minerals rather than elimination of any of the existing major producers in the desert.

Livestock use on 12 allotments would be significantly constrained by the combination of wilderness designation and wildlife habitat protection under the Protection Alternative. Livestock turnout dates would be delayed by 30 days, and livestock forage use on some areas would be reduced by 67 percent in good forage years.

Potential future power plant siting in the desert would be seriously limited in some areas by the necessity of maintaining air quality in wilderness areas near potential plant sites. The potential for future wind-generated electrical power in the desert would also be limited, because most of the high potential sites are in wilderness areas.

Designation of wilderness as proposed in the Balanced Alternative would have no significant effect on visitation. Approximately 7 percent of the dollar value of the mineral reserves under BLM control would be unavailable due to stringent restrictions on exploration and development. This alternative contains 60 percent less wilderness acreage than the Protection Alternative. Negative impacts on livestock allotments would be similarly reduced.

Designation of wilderness proposed under the Use Alternative would have little effect on economic uses of the CDCA. The value of mineral reserves under wilderness areas would be less than one percent of the total CDCA reserves under BLM management.

Table PE - 5

SUMMARY OF MOTORIZED VEHICLE ELEMENT IMPACTS

Resource	No Action Alternative	Protection Alternative	Balanced Alternative	Use Alternative
Air	◑	○	○	◑
Water	○	○	○	○
Soil	●	○	◑	●
Vegetation	◑	○	◑	●
Wildlife	●	○	◑	●
Cultural	●	⊕	◑	○
Native American	●	⊕	◑	●
Wilderness	◑	○	○	○
Visual	◑	⊕	⦶	◑
General Recreation	◑	◑	⦶	◑
Motorized Vehicle	◑	●	○	⊕
Grazing	○	○	○	○
Burros	○	○	○	○
Social Factors	○	◑	○	○
Economic Factors	○	●	◑	⦶

• LEGEND •

○ **No significant impact**
⦶ Positive impact
⊕ Highly positive impact
◑ Negative Impact
● Highly negative impact

Note: The No Action Alternative assumes present BLM management, actual livestock use, and that wild horse and burro numbers will remain unchanged over the next 20 years (see page 31 of the plan for a more complete explanation).

The Protection, Balanced, and Use Alternative columns indicate impacts anticipated in the next 20 years when an alternative is compared against existing 1980 conditions.

IMPACTS OF THE MOTORIZED VEHICLE ELEMENT

Motorized vehicle use provided for in this element would cause significant impacts to many natural and cultural resources. Impacts described below would be the result of continued use through the year 2000 as prescribed under each plan alternative. To supplement the cumulative impacts of each alternative, a summary of the significant potential impacts that would occur in each open area is contained in this section (see Tables MV-1, MV-2, MV-3, and MV-4 following narrative discussion).

* * *

⊙ On Air Quality. ORV activities can impact air quality by increasing dust production from soils and gaseous pollutant emissions from the ORVs and access vehicles themselves. Impacts of ORV activity on dust production are discussed in the soils section. Gaseous emissions depend upon the number of vehicles in operation, the number of vehicle miles travelled between residences and ORV areas, the type of vehicle, and the period of time in operation. Because of the lack of data on these parameters, quantitative estimates of emissions for each alternative cannot be made with any accuracy. In general, the pollutant emissions increase in proportion to the amount of ORV use. Thus, because the Use and No Action Alternatives have so much greater area in the intensive use category, they were rated as having negative impacts. (This assumes that greater areas in intensive use equates to more total vehicle operation.) The Balanced and Protection Alternatives, with several times less area set aside for ORV use, were rated as having no negative impacts on air quality.

⊙ On Water Resources. ORV use increases water runoff and soil erosion. This impact has been covered in the soils section. Increased sedimentation may result from motorized vehicle use and may impact streams. Perennial streams are rare in the desert, however, and virtually all have been identified as ACECs. Therefore, where protection of beneficial uses of water is concerned, the Motorized Vehicle Element will be subject to the ACEC management guidelines. Ground water would not be significantly impacted.

⊙ On Soils. ORVs can severely compact soils (which may reduce root growth or infiltration of water), increase soil loss by wind or water erosion, and exceed air quality standards for particulates by increasing dust production from soils (see Appendix 8). Other physical, chemical, and microbiological changes may also occur. These impacts would occur in all alternatives. The important difference between alternatives is the area of soil within the multiple use classes which would actually be subjected to impacts, such as severe compaction or significant losses of soil by erosion. The collective impacts cannot be quatitatively predicted with accuracy.

The alternatives have increasing areas in the Multiple Use Class I in the order: Preservation, Balanced, No Action, and Use. Therefore, the estimated soil impacts increase in the same order (there is some uncertainty in that ORV activity may be more concentrated and cause more intense damage where the open areas are smaller).

The No Action Alternative has 5.2 percent of public lands in Class I open areas where ORV use would subject the soils to increased compaction, wind and water erosion, and dust production. ORV use in other restricted use classes will also cause increased soil impacts.

The Balanced Alternative would designate 2.4 percent of the public lands as being in Class I open areas, a much smaller area than in the No Action Alternative. The Balanced Alternative has 37 percent of the public lands classified for vehicle use on existing roads and trails, compared to 62 percent in the No Action Alternative. This would also reduce areas of soil subjected to impacts, because some vehicles will illegally travel away from these roads and ways.

The Protection Alternative has 0.8 percent of the public lands in open areas and 5 percent of the CDCA in existing roads and ways areas. The very heavy damage caused by ORVs on hillclimbs would be reduced because Jawbone Canyon and Dove Springs would not be open in the Protection Alternative.

Significant soil impacts would be permitted in a very widespread area in the Use Alternative where 11 percent of the public lands would be in off-road vehicle open areas. The Use Alternative has 65 percent of the public lands restricted to vehicle travel on existing roads and ways.

Because the Use and No Action Alternatives have so much greater area in open areas, they were rated as having highly negative impacts, whereas the Balanced and Protection Alternatives, with several times less area set aside for ORV use, were rated as having negative and no significant impacts, respectively.

⊙ On Vegetation. Motorized vehicle free play and competition have direct and indirect impacts on vegetation. Direct impacts include: destruction of vegetation along trails, pit areas, campsites, and courses of random travel, and soil displacement and compaction along routes of travel. These impacts are intensified by increasing frequencies of use, particularly if soils are moist or wet.

Increased compaction of soils significantly lowers growth and germination rates of annuals and perennials because of damages in soil surface structure (reduced rates of infiltration, increased bulk density, reduced porosity). This impairs soil water-holding ability and aeration and increases the range of temperature extremes within the soil. Coupled with direct destruction of vegetation (in some instances large shrubs up to 12 feet high have been toppled), these effects work to bring about changes in composition, cover, pattern, and appearance of native vegetation. Growth of noxious weeds is encouraged on impacted areas. Recovery periods are on the order of tens of decades or more.

Erosion along hillclimbs and on slopes moves material downslope where it buries vegetation at the foot of the slope. In canyons it moves into washes, arroyos, or streams and is eventually transported downstream where the increased silt load may have deleterious effects on vegetation.

Under the No Action Alternative, continued destruction and disturbance to vegetation on 628,000 acres of open areas would continue. This amounts to approximately 250,000 to 370,000 tons of plant biomass lost from production. Currently there are 14 open areas which have received various degrees of impacts on the vegetation. Eight Rare, Threatened, or Endangered species would continue to be impacted, and one population could be reduced by 30-70 percent within the open area. Over 20,000 acres of one unique plant assemblage is impacted from current ORV use, amounting to 15 percent of its distribution.

In the Protection Alternative, only six open areas are provided. It is estimated that over 100,000 tons of plant biomass would be lost. The same types Rare, Threatened, or Endangered plants and UPAs as in the No Action Alternative would be impacted under this alternative, but over a more limited extent of their occurrence.

In the Balanced Alternative impacts to vegetation would cause a loss of production equal to about 187,800 tons of biomass. Eight Rare, Threatened, or Endangered species would continue to be impacted. One UPA would be impacted.

In the Use Alternative between 900,000 to 1.6 million tons of plant biomass would be lost from production. This would be an increased loss of biomass of 650,000 tons to 1.2 million tons over the No Action Alternative. In addition, 8 Rare, Threatened, or Endangered species would receive continued impacts; 5 other species would also receive impacts. Approximately 80 percent of one UPA would be open to additional impacts, although impacts are expected to be minor.

⊙ On Wildlife. Three components of the Motorized Vehicle Element have impacts on wildlife resources: open areas, existing roads and ways, and closed or wilderness areas.

Unrestricted vehicle use in open areas has long-term and severe impacts on wildlife resources through 1) direct or indirect mortality, 2) disturbance to critical behaviors, 3) damage from high noise levels, 4) habitat damage and loss, 5) fragmentation of habitat on both large and small scales, 6) establishment of undesirable exotic plants in disturbed areas, and 7) cumulative effects of camping, shooting, and collecting. These impacts are well-documented and include declines in all wildlife populations studied, with some extirpation, and considerable loss of diversity. Impacts would be most severe in the Use Alternative, with 11.8 percent of the public lands classified as open, followed in descending order by No Action (5.2 percent), Balanced (2.4 percent), and Protection (0.8 percent) Alternatives.

Implementaion of allowable actions in the Use Alternative (with 20 Open Areas) would have significant desertwide negative impacts on several listed, sensitive, and significant species and on most special wildlife areas. For examples, three of seven Desert Tortoise crucial habitats would either be destroyed or substantially reduced in size; two of eight raptor breeding areas would be significantly reduced (46 to 89 percent); one of five crucial Mohave Ground Squirrel habitats would be lost, as would 12 percent of all habitat of this species on public lands; five of 39 geographically distinct populations of Mule Deer would be deleteriously affected and possibly lost; 26 percent of Colorado Fringe-toed and 16 percent of Flat-tailed Horned Lizard habitats on public land would be lost; two seasonal ranges and three transient ranges of Bighorn Sheep would be diminished or lost; 41 percent of Couch's Spadefoot Toad habitat would be lost; 85 percent of Algodones Dunes endemic beetle and moth habitat would be destroyed; 20 percent of all Desert Kangaroo Rat habitat in the CDCA on public land would be lost; and there would be deleterious impacts on eight areas proposed, but not designated as wildlife ACECs.

The effect of the No Action Alternative on wildlife would be similar, but the severity of impacts would be somewhat reduced for Desert Tortoise, Golden Eagle, Prairie Falcon, Mule Deer, Bighorn, and proposed wildlife ACECs. Wildlife populations and habitats will be positively affected by the elimination of the Rand, Stoddard Valley, and Algodones Dunes Open Areas in the Balanced Alternative. Positive impacts are not as high as might be expected however, because parts of these areas have received such severe damage that recovery would require centuries. The Protection Alternative would be most beneficial to desertwide wildlife resources; however there are still significant negative effects on Dumont Dunes endemic beetle species, Desert Tortoise crucial habitat in Johnson Valley, and other species.

It is significant that 5.2 percent of the public lands were classified as "open" in the 1973 ICMP for off-highway vehicle use. There have been serious problems in enforcing these regulations, and a substantially larger portion (12-15 percent) of the California desert public lands are used as "open" than is officially authorized. If ORV use is not regulated more effectively in the future, the negative impacts described above and summarized in the EIS tables could be greater.

Unrestricted motorized vehicle use on existing roads and ways will have serious negative effects on wildlife (Appendix 10). Mechanisms in addition to those described for open areas include: 1) destruction and degradation of habitat through designation of selected washes as "ways", and 2) unrestricted use of small dune systems in Multiple Use Class M. Factor 1 is especially significant. The loose definition of "ways" and the seven-year period before completion of roads and way designations will contribute to proliferation of new exisiting roads and ways and increase the difficulty of enforcement of vehicle regulations in areas to be managed under Multiple Use Class L guidelines.

Impacts of motorized vehicles on wildlife are most severe in the Use Alternative, where 65 percent of the public lands are categorized as "existing roads and ways", followed by 62 percent in No Action, 38 percent in Balanced, and 5 percent in Protection. Examples of impacts in the Use Alternative are: (1) degradation of 71 percent of the habitat of the State-listed Mohave Ground Squirrel, preventing future habitat and population recovery, perpetuating the need for continued State Rare listing, and contributing to the need for future Federal listing; (2) widespread deleterious impacts of 75 percent of Desert Tortoise habitat, preventing reversal of current population declines and increasing likelihood of Federal Threatened listing; (3) deleterious impacts to over 50 percent of Desert Bighorn Sheep populations; and (4) disturbance to 56 percent of Golden Eagle and 60 percent of Prairie Falcon foraging areas, as well as provision of increased access to sensitive nest sites. Negative effects on wildlife resources are considerably lessened in the Protection Alternative. However, they are still significant for such species as the Mohave Ground Squirrel, Colorado Fringe-toed Lizard, and Desert Tortoise.

The percentage of the public lands in closed or wilderness areas varies from 5 percent in the No Action and Use Alternatives to 43 percent in Protection Alternative (see Wilderness Element).

⊙ On Cultural and Native American Resources. Motorized vehicle use is a primary factor in contributing to the ongoing damage and destruction of cultural resources in the California desert. All forms of motorized vehicle use increase the accessibility of fragile and sensitive cultural resources to the general public. ORV use poses potentially devastating direct and indirect threats to prehistoric and historic cultural resources as well as areas of Native American value. Lyneis and Weide (1979) in the analysis of sample data from the CDCA indicate that ORV damage is the most frequent form of human impact to cultural sites. An informal poll of archaeologists, historians, and Native American leaders in the course of the DPS inventory has identified ORV use as the single most serious human-caused threat to cultural resources.

Much of the damage caused by ORV use is the result of indiscriminate off-road and off-trail use. A few prehistoric and historic sites crossed by roads continue to be exposed to gradual impacts. However, ORV open areas exhibit the most marked and extensive destruction of cultural sites. Use patterns in areas so designated contribute to the rapid destruction of sensitive desert ecosystems (Johnson, H., et. al. 1979) upon which many traditional Native People continue to depend.

The Council on Environmental Quality (Sheridan 1979) has identified several dimensions of impact from motorized vehicle use. These include: increased access to remote areas, the obliteration of surface indications of archaeological sites, acceleration of erosion processes, the increased deterioration of soils, and degradation of ecosystems. Although the scientific recovery of archaeological and historical data can mitigate some of these impacts to a limited degree, data recovery does not lessen the overall profile of impacts to the natural environment and those resources of contemporary Native American traditional value. The paradox, even where data recovery is possible and feasible, is that such recovery is limited in scope by current technical capabilities and theoretical context. The protection of rare or unique cultural sites for future study is not an alternative in areas subject to increasing ORV impact or those portions of the desert which are zoned open for ORV use. It may be anticipated that in these situations a great deal of potentially valuable data and innumerable cultural resources will be lost.

A final component of the Motorized Vehicle Element which would have both positive and negative effects upon all aspects of the Cultural Resource/Native American Element is the limitation of vehicle access in areas to be designated as "closed". Complete closure to vehicle access without a process for permitting or review would limit both the scientific study of cultural resources and the ongoing traditional use of many areas by Native American elders.

Estimates of minimum numbers of sites exposed to deterioration and possible destruction by motorized vehicle activity varies substantially by alternative within ORV Open Areas. It is estimated that 90 prehistoric/historic sites would be implicated under the Protection Alternative, 670 sites would be jeopardized under the Balanced Alternative, and 5,315 would be threatened under the Use Alternative. Native American sensitivity indicate that 53 sites would be at risk under the Protection Alternative, 148 would be jeopardized under the Balanced Alternative, and 157 would be threatened under the Use Alternative. These figures pertain to known or predicted site numbers based on limited inventory.

⊙ On Visual Resources. Roads are one of the most prevalent sources of impact to visual resources. This applies mainly to large-scale roads which are generally straight and wide enough for two vehicles. This type of road, mainly on bajadas, creates a strong form contrast with an equally strong line effect through a landscape that is otherwise lacking any naturally occurring form and line variety. The straight line effect compounds this unnatural situation. Large-scale roads can be quite visible in the background distance zone of 3-15 miles. Small scale roads (one vehicle width) lying in or parallel to braided wash patterns tend to be most natural in appearance, offering shorter stretches to view, and tending not to be very contrasting beyond the middle-ground distance zone of 1-3 miles.

It is difficult to assess what kinds of roads will be built in the future, but judging by past activity there would probably be applications for a high percentage of small-scale and a low percentage of large-scale roads. Most of the latter would be associated with major mine developments and energy-utility facilities. Most large-scale roads that would ever be built are probably already in existence.

ORV open area use can create varying degrees of visual contrast. Dunes and dry lake systems are the least visibility impacted due to the absence of vegetation and short regeneration periods. Use in bajada landscapes can create strong contrasts in the foreground distance zone (0-1 mile), but contrasts are generally not noticeable from beyond foreground due to retention of vegetation texture and flat terrain. Use on hillsides creates the strongest, most visible and most durable contrasts with the series of parallel tracks and more vertical viewing angle.

TABLE PE-6

ASSESSMENT OF VISUAL IMPACTS TO ORV OPEN AREAS

	No Action	Protection	Balanced	Use
Areas with no visual impact	7	5	8	9
Areas with some degree of visual impact	9	1	5	12

Those areas for which a visual impact is shown (ranging from all of small acreage areas or 5-20 percent of large acreage areas) are generally for the portions of the open areas within the foreground distance zone from major roads or non-ORV recreation use areas.

Visual impact assessment for this element is based upon (1) the impacts from large and small-scale roads, (2) the likelihood of future applications for large and small roads, and (3) predicted impacts from ORV open areas. The potential for adverse visual impacts (a function of conflicting goals) between each of the four alternatives and the optimum distribution of multiple use classes based upon an inventory of visual resources are as follows (the figures represent the percentage of the public lands for which there is a potential for adverse visual impacts under each alternative): Use -- 30 percent, No Action -- 25 percent, Balanced -- 10 percent, and Protection -- 1 percent.

⊙ On Wilderness. The No Action Alternative of the Motorized Vehicle Element would result in continued degradation of wilderness values and opportunities throughout the public lands. There would be no significant impact to wilderness values and opportunities within designated wilderness areas as a result of any of the alternatives in the Motorized Vehicle Element.

⊙ On Vehicle-Oriented Recreation Itself. The No Action Alternative of the Motorized Vehicle Element would result in the continued degradation of open areas resulting in a loss in free play and competitive use opportunities and a significant reduction in experiences. Confining these uses to a few small open areas would result in degradation of the recreation resource, boredom, loss of challenge, and overcrowding.

The Protection Alternative of the Motorized Vehicle Element would severely limit vehicle access and free play use. Opportunities for all forms of vehicle oriented recreation (i.e., free play, competitive use, vehicle touring, trail riding, and exploring) would be greatly restricted. Over forty percent of the public lands would be closed to vehicular access in the Protection Alternative and would create an adverse impact on all recreational opportunities relying on vehicular access. This impact would be somewhat lessened by increased opportunities for primitive recreational experiences which would be maximized under this alternative.

Impacts on recreation in the Balanced Alternative would be slightly positive as the full spectrum of recreational opportunities and experiences would be adequately represented.

The Use Alternative would significantly increase opportunities and experiences for all forms of vehicle-oriented recreation, especially free play and competitive use. New areas would be provided offering variety and challenge. Only 5 percent of the public lands would be formally closed to vehicle travel under this alternative.

⊙ On Socioeconomic Values. The scale of existing ORV use in the CDCA is best approximated by totalling use at the areas proposed for open status in the Use Alternative. In 1977 ORV based activity was 2.3 million visitor-use days. The following impact assessments are in comparison to that level of use, recognizing that much of the present ORV activity takes place outside of designated open areas.

Off-road vehicle use under the No Action Alternative would remain at its present level or would decline slightly due to increased compliance with existing vehicle-use regulations and energy supply problems. By the year 2000 total visitor use of designated open areas will be approximately 2.3 million visitor use days annually. The use of ORV's in present unauthorized open areas would be confined to existing or designated roads and ways resulting in a channeling of the activity to designated open areas. The result would be little growth in the off-road segment of the motorcycle, four-wheel drive, and dune buggy industries based on use of the CDCA. The greatest effect would be on the motorcycle industry, because most off-road activity is principally based on motorcycle use.

People who base their life style on ORV sport in the desert would be able to continue to do so. A declining proportion of a growing population would engage in this life style.

Under the Protection Alternative ORV use would decline to about 40 percent below present levels by the year 2000. The decrease in use would begin upon implementation of this alternative. This level of use would cause most potential ORV users to divert their interest to on-road vehicle use or to seek another recreational activity. The ORV industry would drastically shrink or focus on the production of vehicles compatible with the regulations for road use exclusively. The motorcycle segment of users is estimated to spend over $300 million per year in southern California. That spending would be reduced to an estimated $200 million under this alternative, with immediate declines taking place upon implementation.

Most of the people pursuing a life style based on ORV use of the public lands would find other outlets rather than use the remaining congested open areas. Some would divert their activity to non-BLM vehicle use areas, such as State-operated off-road vehicle parks and the National Forests.

Under the Balanced Alternative ORV use would decline by about 10 percent from present levels. The ORV motorcycle industry and sport in southern California would experience a short-term decline followed by stabilization at a slightly lower level of activity. The sport would focus on increasing proportion of interest on vehicles and activities compatible with regulations applying to use of existing and designated ways.

The ORV life style would be continued with practitioners adjusting to more concentrated use in open areas and some diversion of use to off-road vehicle parks and National Forests. A declining proportion of a growing population would engage in this life style.

By year 2000, off-road vehicle activity would increase by about 20 percent above present level under the Use Alternative. Use would continue to grow at a small rate, unaffected by the conversion of present unauthorized open areas to designated open areas. Increase in the activity would be contained by increasing cost of fuel and vehicles, as well as increased enforcement of vehicle use regulations outside of open areas.

The number of people pursuing an ORV lifestyle would grow moderately as they found increased areas for legitimate vehicle play and travel.

Table MV-1

MOTORIZED VEHICLE ELEMENT
NO ACTION ALTERNATIVE

Soil	Vegetation	Wildlife	Cultural	Visual Resources	Recreation
		Olancha (3)			
No significant impacts.	No RT&E species or UPA would be impacted.	No impacts to any known Federally or State listed, sensitive or significant species.	Severe impacts to 3,840 acres of high sensitivity / significance and 425 or more sites that are predicted to exist here. 22,400 acres have high potential for buried sites. There are 3 linear miles of significant historic trail present as well.	No significant impacts.	No significant impacts.
		Dumont Dunes (4)			
Sandy soils not significantly impacted. Dust would not be produced.	No RT&E species or UPA would be impacted.	Loss of 95% of habitat of potential new species of beetle (*Trigonoscuta* n.sp.). Loss of 3,200 acres (3%) of habitat of Mohave Fringe-toed Lizard within 5 to 10 years.	Low impacts to 5,120 acres of high to very high buried site potential and probably 10 prehistoric sites.	Excellent visual qualities would not be significantly impacted.	Floral displays would be reduced by ORV use.
		Spangler Hills (5)			
Large areas with severe compaction. Increased wind erosion. Frequent violation of air quality (dust) standards for total suspended particulates. Increased water erosion on some compacted trails running downslope.	Loss of 5-10% of livestock forage	Loss of 82,750 acres (7% of total CDCA habitat) for Mohave Ground Squirrel; non-crucial habitat. Loss of 58,000 acres, of which 8,320 acres are crucial (Fremont - Stoddard) Desert Tortoise habitat, within 5 to 10 years. Loss of 76,800 acres of foraging habitat for 5 pairs of Prairie Falcons and 67,800 acres for 2 pairs of Golden Eagles; expected decline of El Paso - Red Mtn. - East Sierra Raptor Breeding Area by 37% for Prairie Falcons and 15% for Golden Eagles. Loss of 83,200 acres of Desert Kit Fox and Burrowing Owl habitat.	Severe impacts to more than 200 prehistoric and 75 historic sites. One National Register and one potential National Register property severely impacted. Potentially severe impacts to 6,400 acres very high and 10,880 acres high sensitivity / significance and 12 linear miles of significant historic roads and trails. Some buried site potential as well.	Excellent (20%) and good (80%) visual qualities would be degraded.	Reduced hunting opportunities.
		Rand (6)			
Same as Spangler Hills Open Area.	No RT&E or UPA impacted. Loss of 4% of forage in Cantil Common Allotment.	Loss of 70,400 acres of prime high - density Desert Tortoise habitat, all of which is considered crucial (Fremont - Stoddard) habitat, in 10 to 15 years. Loss of 28,200 acres of Prairie Falcon foraging habitat and 28,200 acres of Golden Eagle habitat (several pairs); eventual loss to El Paso - Red Mtn. - East Sierra Raptor Breeding Area of 7 to 30% within 5 to 15 years.	Low probability of serious impacts to at least 25 prehistoric / historic sites as well as one mile of historic trail.	"Good" visual qualities would be degraded.	Reduction in hunting opportunities.

Table MV-1 (cont.)

Soil	Vegetation	Wildlife	Cultural	Visual Resources	Recreation
		Loss of 70,400 acres of Mohave Ground Squirrel habitat, of which 24,600 acres are crucial, within 5 to 10 years. Loss of approx. 78,000 acres of Desert Kit Fox and Burrowing Owl habitat in 10 to 20 years. Final destruction of Rand Mtn. upland game habitat. Loss of last block of public land representative of Western Mojave diverse creosote ecosystem. Deleterious impacts along 9 to 12 linear miles of Desert Tortoise Natural Area; severe impacts to margins of The Nature Conservancy property. Contribution to population declines.			
		Dove Springs (7)			
Severe compaction, 10 to 20-fold increase of sediments on slopes. High concentration of dust.	No RT&E or UPA would be impacted.	Loss of 5,120 acres of Mohave Ground Squirrel habitat in 5 years. Loss of 5,760 acres of foraging habitat each for 1 pair of Prairie Falcons and 1 pair Golden Eagles; decline of El Paso - Red Mtn. - East Sierra Raptor Breeding Area by 7% in 5 years. Loss of 5,200 acres of Burrowing Owl and Desert Kit Fox habitat. Loss of 5,000 acres of prime upland game-bird habitat (Chukar, Mourning Dove, Mtn. Quail, California Quail) and prime recreational hunting area. Contributing source of further degradation of East Sierra Canyons occurring north of Dune Springs ("unauthorized" use and "de facto" open areas).	Impacts to 640 acres of very high sensitivity / significance and minimun of 50 prehistoric / historic sites predicted.	Loss of excellent scenic value.	No significant impacts.
		Jawbone Canyon (8)			
Severe compaction. Dust emissions. Accelerated erosion: Water Mechanical Extremely severe water erosion in hill - climb areas.	No RT&E plants impacted. No unique plant assemblages impacted.	1,300 acres of Mojave Ground Squirrel will be degraded with loss of population in open area. 4,500 acres of deer habitat supporting 50 deer would be reduced by 10%. Noise and disturbance would reduce usable range by a total of 15-40%. Prime area for California Bighorn reintroduction would be lost.	3,840 acres of high and 640 acres of very high cultural resources would be impacted. 3 linear miles of historic trails and 50 predicted prehistoric / historic sites will also suffer. Native American collection areas, ritual sites, and rock art areas would be disturbed or destroyed.	Excellent visual qualities would be degraded.	Hunting, birding, and nature observation opportunities would be lost. Education and research value for 8 institutions using the area would be severely reduced.

Table MV-1 (cont.)

Soil	Vegetation	Wildlife	Cultural	Visual Resources	Recreation
		550 acres of tortoise habitat (not proposed critical habitat) severely impacted, local population eliminated. 7,700 acres of prime reptile habitat (38 species) would be destroyed. Decline of 15% of Golden Eagle and 15% of Prairie Falcon raptor core area. Reduced nesting success for 2 pairs of eagles and 2 pairs of falcons.			
		Stoddard Valley (10)			
Severe compaction. Serious wind erosion and dust emissions. Significant increases in runoff and sediment yields.	Significant reduction in annual plant cover. No RT&E plants or unique plant assemblages.	Jawbone Canyon Ecotone and Butterbread Spring riparian areas would be severely decreased, resulting in loss of prime, diverse wildlife habitat. Loss of 31,000 acres of crucial Desert Tortoise habitat, part of Fremont - Stoddard habitat. Loss of 10,300 acres of Prairie Falcon and 10,300 acres of Golden Eagle habitat; eventual decline of Granite - Newberry Raptor Breeding Area by 13% for Prairie Falcons and 14% for Golden Eagles. Loss of 31,000 acres of Burrowing Owl and Desert Kit Fox habitat.	Continued severe impacts to 14 miles of significant historic roads and 200 prehistoric and 25 historic sites. There are 21,120 acres of very high potential for buried sites. Severe impacts would occur to any sites occurring in these areas. Native settlement areas, an aboriginal trail and mythic areas would continue to be severely disturbed. 640 acres of very high and 10,880 acres of high sensitivity / significance plus 50,560 acres of high to very high potential for buried sites exist in area.	Fair qualities would be further reduced.	Significant reduction in hunting opportunities.
		Johnson Valley (12)			
Severe compaction in pit area (60 acres) and intensively used trails adjacent to pit area (1,600 acres). Valley fever fungus found in this area could be spread by motorized vehicle activity.	33-100% vegetation removal on 90% of creosote rings and Mojave Yucca clones plant assemblages. 15-25% loss of livestock forage and 5-7% reduction in grazing.	Same as Use Alternative.	A portion of the Rodman Mts. Archaeological National Register District and a predicted 300 prehistoric / historic sites will also be negatively impacted. A minimum of 175 predicted sites are expected to suffer moderate negative impacts. 3,200 acres hold high to very high buried site potential. Severe impacts can be expected to Camp Young WWII training headquarters.	Fair visual quality would be degraded	Reduced hunting opportunities. Proposed decrease in open area size (-57,600 acres) and projected increase in user density would decrease opportunities and reduce the quality of the ORV experience.

Table MV-1 (cont.)

Soil	Vegetation	Wildlife	Cultural	Visual Resources	Recreation
Orocopia (14)					
Severe compaction on intensively used areas.	No listed species or unique plant assemblages impacted.	Loss of 34,600 acres of Desert Tortoise habitat including 23,040 acres or 9.4% of Chuckwalla crucial area; below recovery levels in 5 to 10 years. Loss of 11,500 acres of Prairie Falcon foraging area for 3 pairs as well as 1 nest. Loss of 11,500 acres of Desert Bighorn seasonal range (14% of entire herd use area) in Orocopie Mtns. Eventual reduction and potential extirpation of herd of 40. Loss of 3,460 acres (14% of desertwide total) of Desert Shrew habitat.	Degradation of Shaver's Well Historical Site. Degradation of Historic Cahuilla Village site, burial, milling sites and caves.	Degradation of floral displays. Excellent visual quality would degrade to good or fair.	Reduced hunting opportunities. Reduction in educational and scientific study.
Blythe (15)					
Same as before.	No RT&E plants or UPA impacted.	Loss of 235,000 acres of Desert Tortoise habitat, of which 53,120 acres are crucial Chuckwalla habitat; represents 23% of Chuckwalla total.	1,900 prehistoric and 200 historic sites are predicted and all could potentially be disturbed or destroyed. 14,080 acres of very high and 37,120 acres of high sensitivity / significance have been identified as have 50 linear miles of historic roads / trails and 32,000 acres of buried Early Human site potential. Impacts expected to be extremely severe. The concentration of rock art sites as ritual localities would be disturbed. Intaglios, petros, pictos, and the ethnigraphically located trading center would be severely degraded. Indian trails would be destroyed.	Visual qualities would be degraded.	Reduced hunting opportunities. ORV use would not increase due to distance from urban areas.
McCoy Valley (16)					
Same as before.	*Colubena californica* a listed species by the California Native Plant Society would receive low to moderate impacts.	Loss of 36,400 acres of Desert Tortoise habitat; below recovery levels in 5 years. Loss of 22,000 acres (40%) of transient range for Desert Bighorn Sheep in the Big Marias. Impinge on transient range in Little Marias also. 100% loss of proposed wildlife ACEC in McCoy Wash, a sensitive wash habitat with high wildlife diversity.	At least 575 prehistoric / historic sites could be impacted. 640 acres of very high and 13,440 acres of high sensitivity / significance also stand to suffer. Permanent village sites and burial areas would be severely impacted.	Scenic values would be degraded.	Milpitas Wash would lose its good - to - excellent hunting qualities as well as its excellent birding opportunities.

Table MV-1 (cont.)

Soil	Vegetation	Wildlife	Cultural	Visual Resources	Recreation
North Algodones Dunes (18)					
Sandy soils not significantly impacted nor would dust be produced.	Plant cover would be reduced 33-100%.	Same as Use Alternative, although slightly more extensive.	1,920 acres of very high and 640 acres of high sensitivity / significance stand to be impacted as well as 3,840 acres of very high potential for buried Early Human sites. At least 45 prehistoric sites could be impacted. Kamis hunting area, Dieguено, Yuma and Maricopa mythic association areas would be severely impacted.	Excellent visual rating would be unaffected.	Ten educational institutions would decrease their use of this area.
Plaster City (19)					
Severe soil compaction in pit area and trails. Increased potential for wind erosion.	33% reduction in listed species (*Philostyles thubuni*) and its host plant on most areas, a 100% reduction in heavily used areas.	Loss of 43,800 acres of Flat-toed Lizard habitat (2% of total) in 5 to 10 years. Major destruction to several Colorado Desert ecosystems found nowhere else in U.S., i.e., Smoke Tree Wash communities; creosote-desert holly pavements cut with wash stringers. Deleterious influence on transient range of Coyote Mtn. Peninsular Bighorn Sheep habitat; potential loss of range. Destruction of southern part of ecotone between western Colorado Desert and southern coastal communities; important zone of intergradation and hybridization.	8,320 acres of high sensitivity / significance and 23,680 acres of high to very high buried site potential could be severely impacted. In addition, possibly 1,125 prehistoric sites and 2 National Register properties (including 8 linear miles of historically significant trails) also stand to be disturbed and/or destroyed.	Reduction of visual quality.	No significant impact.
South Algodones Dunes (21)					
Sandy soils not significantly impacted, nor would dust be produced.	See Gecko Campground analysis (Balanced Alternative).	Same as Use Alternative.	At least 150 archaeological sites could be impacted as well as 3,840 acres of very high sensitivity / significance areas.	Excellent visual quality would not be impacted.	Opportunities for scientific and educational research may be lost.

Table MV-2

MOTORIZED VEHICLE ELEMENT
PROTECTION ALTERNATIVE

Soil	Vegetation	Wildlife	Cultural	Visual Resources	Recreation
Dumont Dunes (4)					
Sand Dunes most resistant to soil impacts.	Same as Balanced Alternative.	Same as Balanced Alternative.	No known sites. Potential for buried sites of an early age present. Sensitivity to some Native American groups.	No visual impact.	Same as Balanced Alternative.
Johnson Valley (12)					
Same as Balanced Alternative.	Same as Balanced Alternative. 80,640 acres would be impacted; 50,000 tons (dry wt.) of vegetation biomass would be removed.	Desert Tortoise population on 19,000 acres (18,000 acres are crucial habitat), estimated to decline at rates greater than 50% per year, would be below recovery levels in 5 years. Newberry - Granite raptor breeding area would decline 6% for Prairie Falcons, 14% for Golden Eagles (1 pair of Prairie Falcons, 3 pairs of Golden Eagles). Desertwide loss of 1-4% of crucial pairs.	Potential impacts to 15 prehistoric and 3 predicted historic sites. 25,600 acres of high cultural sensitivity / significance could be negatively affected.	No visual impact.	Reduced hunting opportunities. Proposed decrease in existing open area size (112,000 acres) with projected increase in user density would substantially decrease ORV opportunities and reduce the quality of the ORV experience.
Orocopia (14)					
Same as Balanced Alternative.	Same as Balanced Alternative.	Same as Balanced Alternative.	Degradation of Shaver's Well historic site. Potential for buried / Early Human sites throughout area. Fewer than 2 prehistoric / historic surface sites expected.	See Balanced Alternative.	Reduced hunting opportunities. Floral display sightseeing opportunities reduced. Possible reduction in opportunities for scientific and educational study. Reduction in opportunities for recreation in a primitive environment. This new open area (1,280 acres would provide additional ORV opportunities, especially for pit and staging areas for competitive ORV use.
Plaster City (19)					
Same as Balanced Alternative.	Same as Balanced Alternative; only 4,480 acres would be impacted.	Loss of 3,800 acres of Flattailed Horned Lizard habitat (non-crucial). Loss of 12,800 acres of Colorado Fringe-toed Lizard habitat, an estimated 2% of total range.	Predict 5 to 8 prehistoric surface sites per 640 acres could be impacted. Two miles of the Fages - DeAnza Trail - Emigrant Road National Register property and Sackett's Well could be impacted. High-to-very high potential for buried / Early Human sites throughout the area. Historic campgrounds and traditional collection areas, and possible mortuary sites.	No visual impact.	Reduction in existing open area size (39600 acres) and projected increase in user density would decrease opportunities and experience for ORV free play and competitive events.

Table MV-2 (cont.)

Soil	Vegetation	Wildlife	Cultural	Visual Resources	Recreation
		Gecko Campground (21A)			
Sand Dunes most resistant to soil impacts.	Same as Balanced Alternative.	Would destroy ˙8% of habitat of endemic Dune Bettles (e.g., *Pseudocotalpa andrewsi*); also of rare butterflies and moths. Would destroy 5,160 acres of known habitat of Couch's Spadefoot Toads (0.6% of desertwide habitat). Would destroy 13,400 acres of Colorado Fringetoed Lizard habitat (2% of desertwide range).	Few impacts expected. 640 acres of high - to - very high probability of buried sites. Limited areas of Native American significance.	No significant impact.	Reduction in existing open area size (108,760 acres) and increased user density would decrease ORV free play opportunities.
		Buttercup (21B)			
Sandy soils not significantly impacted.	Same as Balanced Alternative.	Same as Balanced Alternative.	Unique historic plank road might be further impacted. Potential impacts to 640 acres of high sensitivity / significance. Density of less than one site per 130 acres predicted,; of unknown significance. Potentially 2,560 acres of buried sites. Native American seasonably occupied campgrounds, an old Indian Well, and mesquite collection territory would suffer detrimental impacts.	No visual impact.	Reduction in existing open area size (108,160 acres) and projected increase in user density would decrease ORV free play opportunities.

Table MV-3

MOTORIZED VEHICLE ELEMENT
BALANCED ALTERNATIVE

Soil	Vegetation	Wildlife	Cultural	Visual Resources	Recreation
		Panamint Dunes (1)			
Dune sands most resistant to soil impact.	As much as 80% reduction in cover of dunes vegetation. Possible dune destabilization. Heavy impaction. *Astragalus dentiginasus* var. micans 80-100% reduction in plant population. No UPAs in open area. Exotic weeds would increase at the expense of the native vegetation.	All of the habitat of two species of endemic beetles (*Phobetus sleeperi* and *Trigonoscuta*) would be destroyed. 1 to 5% of Desert Kangaroo Rat habitat in CDCA would be eliminated.	2,000 acres of very high sensitive cultural resources would be severely impacted. More than 20 sites probably will be impacted.	No visual impact.	This new open area would provide an additional 640 acres for ORV opportunities and experiences.
		Dumont Dunes (4)			
Dune sands most resistant to soil impact.	Impacts similar to Panamint Dunes. Total area impacted would be 2,688 acres. No RT&E is known to occur in this open area. No UPAs occur within this open area.	Loss of 100% of habitat of a potential new species of bettle, *Trigonoscuta* n.sp. Destruction of 3,200 acres (3%) of habitat of the Mojave Fringetoed Lizard.	Minor impacts expected. 5,120 acres of high - to - very - high buried site potential and up to 10 prehistoric sites predicted.		
		Spangler Hills (5)			
Increased compaction, wind and water erosion, and dust emission.	Effects on vegetation similar to Johnson Valley. Permanent reduction of at least 60,000 tons of vegetation (dry wt.) would be removed by ORV activities within Open Area as compared to non-use situation. No RT&EPs known to occur in open area. No UPAs within open area.	Local and widespread elimination of 86,000 acres of Mojave Ground Squirrel habitat (noncrucial). Elimination of 61,000 acres of Desert Tortoise habitat, of which 8,320 acres are crucial, and part of the Fremont - Stoddard habitat. El Paso - Red Mtn. - East Sierra raptor breeding area would decline 15% for Golden Eagles and 37% for Prairie Falcons (5 pairs of Prairie Falcons, 2 pairs of Golden Eagles). Elimination of Burrowing Owls, Desert Kit Fox and other important animals.	Severe impacts to more than 200 prehistoric and 75 historic sites. Potential impacts to: – 6,400 acres very high sensitivity / significance. – 10,880 acres high sensitivity / significance. – 25,600 acres of potential buried / Early Human sites. – 12 linear miles of significant historic roads and trails. 650 acres of proposed Old Wells and entire Bedrock Spring proposed National Register of Historic Places property could be severely impacted.	Use of about 20% of the area would create a significant visual impact.	Reduced hunting opportunities. Proposed increase in existing open area size (12,544 acres) and projected decrease in user density would increase the quality of ORV recreation opportunities and experience.
		Rand Mtn. (6)			
Increased impact on wind and water erosion and dust production.	Impacts on vegetation similar to Stoddard Valley and Jawbone Canyon. Total area of open area is 1,088 acres. Minimum estimated permanent reduction in vegetation biomass would be around 700 tons throughout the entire open area. No RT&EPs known to occur within this open area. No UPAs known to occur within this open area.	1,300 acres of crucial Desert Tortoise habitat would be eliminated in 2 to 5 years. Also, disturbances to adjacent Desert Tortoise Natural Area / The Nature Conservancy property for the tortoise. Loss of 1,300 acres of noncrucial Mojave Ground Squirrel habitat in 2 to 5 years. Loss of 1,300 acres of Burrowing Owl and Desert Kit Fox habitat and 700 acres of upland game - bird habitat.	Low probability of serious impacts to at least 25 prehistoric/historic sites, as well as 1 mile of historic trail.	No visual impact.	Significant reduction in existing open area size (57,984 acres) and projected increase in user density would decrease ORV opportunities and experiences for free play. However, the areas left would be for competitive events, pit and staging areas. Reduced hunting opportunities.

Table MV-3 (cont.)

Soil	Vegetation	Wildlife	Cultural	Visual Resources	Recreation
Dove Springs (7)					
Large increases in soil and water erosion on hill climbs. Large mechanical displacement of soil downslope by vehicles on hill climbs. Severe compaction on hill climbs and areas in canyon bottoms. Increased dust production.	64 - 100% reduction of vegetation cover on hillsides (1.2 to 1.8 tons/acre); 90 - 100% reduction of vegetation cover in pit areas (1.6 to 1.8 tons/acre). Total acreage impacted would be 3,008. No RT&E species known to occur within the area. No UPAs within this open area.	Loss of 5,000 acres of noncrucial Mohave Ground Squirrel habitat. El Paso - Red Mtn. - East Sierra raptor breeding area would decline by 7% each for Prairie Falcons and Golden Eagles. (Loss of 8,000 acres of foraging area for each species.) Would contribute to desertwide loss of crucial areas, 1-2% for each species. Loss of Burrowing Owl and Desert Kit Fox population on 5,100 acres.	Low impacts overall. Potentially adverse impacts on 1,280 acres of very high sensitivity / significance.	Very significant visual impacts would occur.	Reduction in existing open area size (2,560 acres) and projected increase in user density would decrease ORV opportunities and reduce the quality of the ORV experience.
Jawbone Canyon (8)					
Large increase in runoff and water erosion on hill climbs. Large mechanical displacement of soil downslope on hill climbs. Increased areas of severe compaction on hill climbs and on canyon bottom. Increased dust production.	35% removal of vegetation cover on sparse trails (0.6 tons/acre); 52% removal of vegetation cover on dense trails (0.9 tons/acre); 73% removal of vegetation on very dense trails (1.3 tons/acre); 90-100% removal of vegetation on hill climbs and pit areas (1.6 to 1.8 tons/acre. Total open area is 5,568 acres. Otherwise, impacts on vegetation would be similar to those for Johnson Valley. No RT&EPs known to occur within this area. No UPAs known to occur within this area.	580 acres of Desert Tortoise habitat (noncrucial) severely degraded, local population eliminated. 7,600 acres of prime reptile habitat for 38 species (some Rare) would be destroyed. El Paso - Red Mtn. - East Sierra raptor breeding area would decline 15% each for Prairie Falcons and Golden Eagles (2 pairs each). Would contribute 2-3% toward loss of crucial areas desertwide. 1,300 acres of noncrucial habitat for Mojave Ground Squirrel would be lost. 4,500 acres of deer habitat, supporting a herd of 50 would be reduced by 10%. Noise and ORV disturbance would reduce usable range by 15-40%. Potential reintroduction area for California Bighorn Sheep would be lost. Major ecotone for Sierra - Mojave would be lost; severe damage to riparian areas and prime wildlife habitat would occur.	640 acres of high and 640 acres of very high cultural resources would be impacted. Severe impacts have already occurred to these areas as well as to 5 miles of significant historic trails. Native American collection areas, ritual sites, and rock art areas would be disturbed or destroyed.	Very significant visual impacts would occur.	Hunting, birding, and nature observation opportunities would be lost. Education and research value for 8 institutions using the area would be severely reduced. This new open area would provide an additional 5,760 acres for ORV free play and compaction.
Stoddard Valley (10)					
Increased compaction, wind and water erosion, and dust emissions.	100% reduction of vegetation cover in pit areas (1.6 to 1.8 tons, dry wt. of vegetation per acre impacted); 90 - 100% reduction of vegetation cover on hillsides; 99% reduction of vegetation on raceways. 35 - 73% reduction in open random - play areas (0.6 - 1.3 tons, dry wt., of vegetation removed per acre). Total open area is 87,680 acres. Otherwise, impacts on vegetation similar to Johnson Valley.	9,000 acres of crucial Fremont - Stoddard Desert Tortoise habitat would be destroyed. Entire population below recovery threshold in 5 to 7 years. Newberry - Granite Mtn. raptor breeding area would decline 50% for Prairie Falcons and 33% for Golden Eagles (foraging area for 5 pairs of Prairie Falcons, 4 pairs Golden Eagles). Desertwide loss of 5-6% crucial pairs.	Continued severe impacts to 27 miles of significant historic roads and trails and more than 200 prehistoric and 25 historic sites. 2,500 acres of high sensitivity area exists, as does a moderate - to - low potential for buried sites. Severe impacts would occur to any sites in these areas.	No visual impact.	Significant reduction in hunting opportunities. This new open area (42,240 acres) would provide additional opportunities for ORV free play and competitive ORV use.

Table MV-3 (cont.)

Soil	Vegetation	Wildlife	Cultural	Visual Resources	Recreation
	No RT&EPs known to occur within open area. No UPAs within open area.	Elimination of Burrowing Owls, Desert Kit Fox. and other significant desert animals.	Native settlement areas, an aboriginal trail, and myth areas would continue to be severely disturbed.		
		Johnson Valley (12)			
Large areas with severe compaction. Valley fever fungus (known to be in Johnson Valley) could be spread by motorized vehicle activity. Increased wind erosion. Frequent violation of air quality (dust) standard for total suspended particulates. Increased water erosion on some compacted trails running downslope.	100% removal of vegetation in pit and camping areas. Total area of impact would be 142,464 acres. Damage to vegetation would drop off with increasing distance from pit and camping areas but could average out to 33% or greater permanent reduction in perennial plant cover throughout area. This represents an average biomass reduction of at least 0.60 ton/acre in creosote bush scrub. This would total 85,000 tons or more throughout the open area. About 90% of the Johnson Valley Ancient Creosote Bush Rings UPA would be moderately to severely impacted. No Rare, Threatened, or Endangered Plant Species (RT&EPs) are known to occur within the open area. Annual cover would be severely reduced in severely impacted areas to a cover reduction of 90% or more, and about 30% overall. Grasses would be affected less than native wildflowers. Noxious weeds, such as *Salsola* spp. and *Brassica tomnefourtii* would be encouraged within the open area at the further expense of native vegetation. Indirect effects would include reduction in germination rates of all plants as a result of soil compaction. In heavily used areas this reduction could approach 100%. Impacts would also include a general reduction in the species diversity of native annuals and perennial shrubs.	Desert Tortoise population on 31,000 acres (24,000 acres are crucial habitat) estimated to decline at rates greater than 50% per year — would be below recovery levels in 5 years. Newberry - Granite raptor breeding area would decline 13% for Prairie Falcon, 20% for Golden Eagles (4 pairs of Golden Eagles and 5 pairs of Prairie Falcons). Desertwide loss of 5 - 6% crucial pairs. Elimination of Burrowing Owls, Desert Kit Fox and other significant animals.	Potential impacts to at least 25 prehistoric and 5 historic predicted sites. 25,600 acres high cultural sensitivity / signicance. Collection area in use seasonally by Native Americans.	No visual impact.	Reduced hunting opportunities. Proposed decreases in existing open area size (57,600 acres) and projected increases in user density would decrease opportunities and reduce the quality of the ORV experience.
		Orocopia (14)			
Increased compaction, dust emission, wind and water erosion.	Same as Johnson Valley for direct and indirect effects on general vegetation. Total biomass reduction throughout area would be on the order of 40,000 tons, assuming a total area of 69,120 acres. No RT&EPs are known to occur within this open area. No unique plant assemblages (UPAs) occur within this open area.	Would deleteriously affect movement and distribution patterns of herd of 40 Bighorn Sheep that seasonally use area adjacent to Orocopia Mtn.	Potential buried / Early Human sites. Two sites / 640 acres. Potential impacts to 640 acres very high sensitivity / significance. Degradation of Shaver's Well historic site. Degradation of Historic Cahuilla Village site, burial, milling sites and caves.	Degradation of floral displays. The entire area would be significantly impacted.	

Table MV-3 (cont.)

Soil	Vegetation	Wildlife	Cultural	Visual Resources	Recreation
		Plaster City (19)			
Severe soil compaction in pit area and trails. Increased wind erosion and dust emission.	Impacts on Plaster City open area similar to Johnson Valley. However, Creosote Bush scrub is sparser here. Total vegetation removal may be less per acre (i.e., 0.3 ton/acre as compared to 0.6). Total permanent reduction of vegetation from this area would be on the order of 10,000 tons (dry wt.) as a minimal estimate. RT&EPs in area include *Pilostyles thurberi*. Impact would be on host plant *Dalea emoryi*. Populations of host plant could be reduced by 100% in heavy-use areas (pits, hill climbs, etc.) and as much as 30 to 70% overall. No UPAs occur within this open area.	Loss of 35,000 acres of noncrucial Flat-tailed Horned Lizard habitat. Loss of an estimated 30,000 acres (6%) of total range. Loss of significant portion of Colorado Desert alkali sink - desert pavement communities in CDCA. Disturbance to Peninsular Bighorn Sheep transient range in adjacent Coyote Mtns. Loss of significant ecotonal habitats for western Colorado Desert edge near Coyote Mtns.	Severe impacts on 5 to 8 prehistoric surface sites, 2 linear miles of the Fages - DeAnza Trail - Emigrant Road National Register Property, and on Sackett's Well historic site. All of the polygon has a high-to-very high potential for buried Early Human sites. Potential impacts on 1,280 acres of high sensitivity / significance cultural resource areas.	No visual impact.	Proposed decreases in existing open area size (12,000 acres) and projected increase in user density would decrease ORV opportunities and reduce the quality of the ORV experience.
		Yuha (20)			
Increased compaction, wind and water erosion, and dust production.	Impacts on vegetation similar to Plaster City. Total area impacted would be 320 acres. Minimum permanent vegetation removal would be about 0.3 ton/acre (dry wt.) or about 100 tons throughout the entire open area. *Eriogonum deserticola*, an RT&EP, would be moderately to severely impacted. No UPAs occur within this open area.	640 acres of Yuha Basin Flat-tailed Horned Lizard habitat (crucial habitat with best populations known) would be destroyed. Colorado Fringe - toed Lizard would experience similar impacts.	Potential impacts on 640 acres of high cultural resource sensitivity / significance, and at least 15 archaeological (primarily prehistoric) sites. Large areas of ongoing traditional significance for Native American heritage values.	Entire area would be significantly impacted.	This new open area would provide an additional 640 acres for ORV competitive events by allowing for pit and staging areas.
		Gecko Campground (21A)			
Sand dunes most resistant to soil impacts.	Impacts on vegetation would amount to 40 to 100% removal of plant cover depending upon intensity of use. Dunes could suffer destabilization in heavily used areas and bury additional tracts of vegetation not directly disturbed by ORVs. Biomass data is not available for dune areas but would probably be less than 0.2 ton/acre. RT&EPs impacted include: *Eriogonum deserticola, Crown wigginsii* (E, USF&WS), *Astragalus magdalense* var. *piersonii, Helianthus niveus* var. *tephrotes* (E, USF&WS), *Palafoxia avila* ssp. *gigantae, Ammobiomasonorae.* Note: *Croton wigginsii* is officially listed as Endangered by the State of California. About 10% (13,500 acres) of Algodones Dunes UPA impacted.	Would destroy 8% of habitat of endemic dune beetles (e.g. *Pseufocotalpa andrewsi*) and of rare butterflies. Would destroy 13,400 acres of Colorado Fringe - toed Lizard habitat (2% of total desertwide range). Would destroy 5,120 acres of known habitat of Couch's Spadefoot Toads (0.6% of desertwide habitat).	Mild impacts expected on 640 acres of high to very-high buried site potential.		
		Buttercup (21B)			
Sandy soils not significantly impacted.	Impacts on vegetation similar to Gecko Campground. Total area impacted would be 8,576 acres.	Would destroy 3.5% of the habitat of endemic dune beetles (e.g. *pseudocotalpa andrewsi*), and of rare butterflies (7,000 acres). Would destroy 7,700 acres of Colorado Fringe - toed Lizard habitat (1% of desertwide habitat).	Historic plank road, 640 acres of high sensitivity / significance, and 2,560 acres of high to very-high buried site potential stand to be moderately impacted. In addition, it is		

Table MV-3 (cont.)

Soil	Vegetation	Wildlife	Cultural	Visual Resources	Recreation
	RT&Es impacted include: *Eriogonum deserticola, Astradalus magdalanae* var. *piersonii, Cronton wigginsii* (E, USF&WS) *Palofoxia crecla* ssp. *gigantea, Ammobioma sonorae, Helranthus nivens* ssp. *Lephrotes* (E, USF&WS). Note: *Croton wigginsii nivens* ssp. *telcrotes* is officially listed as Endangered by the State of California. About 5% of Algodones UPA impacted.	Loss of 2,560 acres (0.3%) of known desertwide habitat of Couch's Spadefoot Toad.	estimated that there is one site per 130 acres of unknown significance which could be disturbed or destroyed.		

Table MV-4

MOTORIZED VEHICLE ELEMENT USE ALTERNATIVE

Soil	Vegetation	Wildlife	Cultural	Visual Resources	Recreation
		Panamint Dunes (1)			
Same as Balanced Alternative		Loss of 100% of habitat of two species of endemic beetles (*Phobetus sleeperi* and *Trigonoscuta*) would be destroyed. 0.1% (640 acres) of Desert Kangaroo Rat habitat in CDCA would be eliminated.	Exceptionally rich area – 1,920 acres of very high sensitivity / significance and potential for buried sites. More than 20 sites are expected to be severely impacted.	No visual impacts.	This new open area would provide an additional 1,920 acres of opportunities and experiences for ORV free play.
		Panamint Valley (2)			
No data.	Impacts on vegetation similar to Johnson and Stoddard Valleys. Total area impacted, 5,184 acres. Probable vegetation reduction after ORV impact would be about 3,100 tons throughout the open area. No RT&EPs are known to occur. No UPAs occur within this open area.	Loss of 5 to 10% of foraging habitat for one pair each of Prairie Falcon and Golden Eagles (1,200 acres). Increased recreation levels would have deleterious impacts on nearby riparian habitats.	Native American historic trails and campsites would be severely impacted. 1,920 acres of area have a very high cultural resource significance / sensitivity. These areas at the least have 20 archaeological sites including the oldest and most accepted Early Human site in the CDCA. Impacts could be serious to irreversible.	No visual impact.	This new open area would provide an additional 5,120 acres of opportunities for ORV use.
		Dumont Dunes (4)			
Same as Balanced Alternative.	See Balanced Alternative.	See Blaanced Alternative.	See Balanced Alternative.	No visual impact.	Decrease in existing open area size (2,560 acres) and increase in projected user densities would decrease opportunities and experiences for ORV free play. Sightseeing opportunities for floral displays would be reduced.
		Spangler Hills (5)			
Same as Balanced Alternative.	See Balanced Alternative.	Loss of 86,000 acres of habitat for Mohave Ground Squirrel within 5 to 20 years. Loss of 64,000 acres of Desert Tortoise habitat, of which 8,300 acres is crucial, Fremont-Stoddard habitat. Population declines of 50% per year expected; below recovery levels in 5 to 10 years. Eventual loss within 5 to 20 years of 76,800 acres of Prairie Falcon and 68,000 acres of Golden Eagle habitat (5 pairs Prairie Falcons, 2 pairs Golden Eagles).	Potentially severe impacts on: 6,400 acres of very high and 10,880 acres of high sensitivity / significance; 12 linear miles of historic roads and trails; 32,000 acres of buried site potential, over 200 prehistoric and 75 historic sites; 5 proposed or eligible National Register of Historic Places properties – Golden Valley, Squaw Springs, Steam Wells, Old Wells, and Bedrock Springs.	Very significant impact on 10% of open area. Significant impacts on 20%.	An increase in existing open area size (22,224 acres) and a projected decrease in user density would provide additional opportunities and experiences for ORV free play and competitive events. Reduced hunting opportunity.

Table MV-4 (cont.)

Soil	Vegetation	Wildlife	Cultural	Visual Resources	Recreation
		El Paso - Red Mtn. - East Sierra Raptor Breeding Area would decline 15% for Golden Eagles, 37% for Prairie Falcons. Loss of 86,000 acres of Burrowing Owl and Desert Kit Fox habitat within 10 to 20 years.			
		Rand (6)			
Same as Balanced Alternative.	See Balanced Alternative for general impacts on vegetation. Total area impacted equals 66,624 acres. Minimum projected permanent vegetation loss (MPP/L) about 40,000 tons overall. No RT&EPs are known to occur. No UPAs occur within this area.	Loss of 70,400 acres of prime crucial Desert Tortoise habitat, with 42,000 acres of highest known densities. Estimated loss to crucial Fremont - Stoddard populations in 5 to 10 years, below recovery levels. Loss of 28,000 acres of foraging habitat each for Prairie Falcons and Golden Eagles (several pairs). El Paso - Red Mtn. - East Sierra Raptor Breeding Area may decline by 30% within 5 to 10 years. Loss of 70,400 acres of Mohave Ground Squirrel habitat, of which 5,400 acres are crucial Fremont Valley habitat. Loss of upland game habitat (<5,000 acres) for Chukar, Gambel's Quail, Mourning Dove. Loss of last block of public land of western Mojave Desert rich creosote ecosystem. Severe impacts and damage to adjoining Desert Tortoise Natural Area for 9 to 12 linear miles. Loss of Koehn Dry Lake Alkali Sink habitat (eastern, southern shores); highly diverse, unique community. Severe damage and possible destruction of Koehn Lake marsh, a special wildlife area.	Potentially severe impacts to: — 1,280 acres of very high and 4,480 acres of high sensitivity / significance. — 23,040 acres have high probability of buried sites. — 9 linear miles of significant historic trail. — Estimated 150 prehistoric and 50 historic sites.	Significant impacts on 10% of area.	Reduction in hunting opportunities. Increase in existing open area size (10,496 acres) would provide additional opportunities for ORV free play and competitive events.
		Dove Springs (7)			
Same as Balanced Alternative.	See Balanced Alternative.	Loss of 5,120 acres of Mohave Ground Squirrel habitat within 5 to 10 years. Loss of 7,700 acres of Prairie Falcon and Golden Eagle (1 pair each) foraging area. Would contribute to 7% decline of El Paso - Red Mtn. - East Sierra Raptor Breeding Area for each species within 5 to 10 years. Loss of 5,100 acres of Burrowing Owl and Desert Kit Fox habitat within 10 to 20 years.	Mild impacts to most of area — however, 1,280 acres of very high sensitivity / significance present.	See Balanced Alternative.	A reduction in existing open area size (2,560 acres) and a projected increase in user density would decrease opportunities and experiences for ORV use.

Table MV-4 (cont.)

Soil	Vegetation	Wildlife	Cultural	Visual Resources	Recreation
		Severe damage to prime upland game habitat (chukar, California, Gambel and Mountain Quail). Loss of prime recreational hunting site. Contributing source of further degradation of East Sierra Canyons occurring north of Dove Springs (unauthorized use and "de facto" open areas).			
		Jawbone Canyon (8)			
Same as Balanced Alternative.	See Balanced Alternative.	Loss of 580 acres of non-crucial Desert Tortoise habitat. Loss of 7,600 acres of prime reptile habitat (38 species) and one of top three "night-driving" for reptile areas in CDCA. Loss of 5,000 acres of Prairie Falcon and Golden Eagle foraging areas (2 pairs each). Eventual decline (5 to 10 years) of El Paso - Red Mtn. - East Sierra Raptor Breeding Area by 15% for each species. Loss of 1,400 acres of Mohave Ground Squirrel habitat within 5 to 10 years. Loss of 7,600 acres of Desert Kit Fox and Burrowing Owl habitat within 5 to 10 years. Loss of 4,500 acres of Mule Deer habitat (10% of Lone Tree herd's habitat) within 10 to 20 years. Potential loss of 15 to 40% of Lone Tree range. Loss of potential reintroduction site in adjacent southern mountains for State - listed rare California Bighorn Sheep. Severe damage to major ecotone in CDCA: confluence of western Mojave, southern Sierra, San Joaquin Valley and transverse ranges. Continued deleterious impacts on nearby riparian areas.	2,560 acres of very high and 1,280 acres of high sensitivity / significance plus 5 linear miles of historic trails could be disturbed or destroyed. At least 5 sites would be seriously impacted.	See Balanced Alternative.	This new open area would provide an additional 5,760 acres of opportunities and experiences for ORV use. Hunting, birding, and nature observation opportunities would be lost. Education and research value for 8 institutions using the area would be severely reduced.
		Bristol (9)			
Increased compaction, wind and water erosion, and dust production.	Impacts similar to El Mirage Dry Lake, Johnson Valley, Stoddard Valley, Dumont and Algodones Dunes. Total area impacted would be 1.2 million acres. Biomass reduction in creosote bush scrub and alkalai sink vegetation would be about 0.6 to 1.8 tons/acre depending upon the intensity of activity. No RT&E plants or UPAs occur.	Loss of 38,000 acres of Prairie Falcon habitat including 1 nest and 141,000 acres of Golden Eagle habitat including 4 nests. These are not in the 8 crucial breeding areas.	Potentially significant impacts to: — At least 2,000 surface prehistoric sites and 250 historic sites (predicted).	No visual impact.	Reduced hunting opportunities. Reduction in non-ORV recreation opportunities. This new open area (478,720 acres) would provide a significant amount of additional opportunities and experiences for ORV free play and competitive events.

Table MV-4 (cont.)

Soil	Vegetation	Wildlife	Cultural	Visual Resources	Recreation
		Loss of Cady Mountain Desert Bighorn Sheep population; loss of transient populations and range in the Bristol Mtns.; contribution to further decline and extinction of Old Dad Mtn. herd; potential deleterious impacts to Granite and Kelso Mtn. herds. Loss of 77,440 acres (80%) of potential habitat for 7 species of endemic beetles in the Devil's playground. Loss of 77,440 acres (7%) of habitat of Mojave Fringe - toed Lizard.	– 13,440 acres of very high and 69,760 acres of high cultural resource significance / sensitivity. – At least 304,640 acres of area having a high to very-high possibility of important and perhaps early buried sites. Greatest impacts expected along playa margin and higher lake stands. Areas identified by numerous Native American groups as areas of traditional use and mythic associations.		
		Stoddard Valley (10)			
Same as Balanced Alternative.	Similar to Balanced Alternative, but 87,680 acres impacted. RT&E,Ps and UPAs same as Balanced Alternative.	Loss within 5 to 10 years of 64,000 acres of crucial Desert Tortoise (Fremont - Stoddard) habitat. Loss of 77,000 acres of Prairie Falcon (8 pairs, 3 nests) and 99,000 acres of Golden Eagle (7 pairs, 3 nests) habitat; eventual decline of Granite - Newberry Raptor Breeding Area by 53% for Prairie Falcons and 33% for Golden Eagles. Loss of 64,000 acres of Burrowing Owl and Desert Kit Fox habitat. Loss of prime reintroduction site for Desert Bighorn Sheep in Newberry Mtns.	Predicted impacts to: – More than 200 prehistoric sites and 25 historic sites. – 27 miles of significant roads and trails. – 8,320 acres of high significance / sensitivity. – 49,920 acres of high to very-high potential for buried Early Human sites.	Significant visual impacts on 10% of open area.	This new open area (158,720 acres) would provide additional opportunities and experiences for ORV free play and competition. Significant reduction in hunting opportunities.
		El Mirage (11)			
Intense soil compaction. State and Federal dust exposure standards would be exceeded on a daily basis.	High impact to salt-bush scrub vegetation on lake periphery. Total area impacted would be 4,928 acres. Impacts on playa bottom involve disruption of surface algal crusts. No RT&EPs known to be present in this open area. No UPAs in this open area.	Completion of destruction to estimated 3,000 acres of Mohave Ground Squirrel habitat in 5 years. Loss of entire Mirage Dry Lake Mojave Fringe - toed Lizard population (estimated 1,900 acres).	At least 10 historic and 5 prehistoric sites could be impacted. 6,400 acres of area have a high probability for important buried sites. Overall impact considered moderate.	No visual impact.	This new open area would provide an additional 5,120 acres of opportunities and experiences for ORV free play and competitive events.
		Johnson Valley (12)			
Same as Balanced Alternative.	See Balanced Alternative. Total area impacted = 253,824 acres. MPPVL = 152,294 tons. No RT&E plants. No UPAs.	Loss of 45,000 acres of Desert Tortoise crucial habitat in Lucerne and Johnson Valleys crucial habitats. Estimated destruction within 5 to 10 years – below recovery levels by then.	Potentially severe impacts would occur on: – 5,120 acres of very high and 11,520 acres of high cultural resource sensitivity / significance. – 10,120 acres with a high potential for buried sites.	Significant impacts on 5% of the area.	Increase in existing open area size (48,640 acres) would provide additional opportunities for ORV free play and competitive events. Reduced hunting opportunities.

Table MV-4 (cont.)

Soil	Vegetation	Wildlife	Cultural	Visual Resources	Recreation
		Loss of 65,300 acres of Prairie Falcon (2 pairs, 1 nest) and 81,000 acres of Golden Eagle (4 pairs, 2 nests) habitat; decline of Granite - Newberry Raptor Breeding Area by 13% for Prairie Falcons and 19% for Golden Eagles. Desertwide decline in crucial pairs by 2 to 6%. Loss of ≈70,000 acres of Burrowing Owl and Desert Kit Fox habitat. Loss of prime reintroduction site for Desert Bighorn Sheep in adjacent Newberry Mountains.	– 7,680 acres of the Rodman Mtns. National Register property. There may be at least 800 prehistoric and 100 historic sites here.		
		Painted Canyon (13)			
No data available.	Impacts similar to Johnson Valley and Stoddard Valley (Balanced Alternative). 4,608 acres estimated permanent biomass reduction compared to similar unimpacted areas about 2,800 tons throughout open area. RT&Es include *Ditaxis californica* (T, U, SF&Ws). No UPAs in this open area.	Loss of 2,800 acres of Mule Deer habitat concentration area in Mecca Hills (8% of total) for herd of 100. Loss of one Prairie Falcon nest site and 5,800 acres of foraging habitat. Loss of 2,300 acres (2.8%) of Bighorn Sheep seasonal range in Orocopia Mtns. Potential for serious herd declines is high.	At least 25 surface prehistoric sites could be severely impacted.	No visual impact.	Sustained use of ORVs would preempt excellent hiking, backpacking, photography and hunting use. This new open area would provide an additional 4,480 acres of opportunities and experiences for ORV free play and competitive events. Reduction in hunting opportunities.
		Orocopia (14)			
Same as Balanced Alternative.	See Balanced Alternative.	Loss of 42,000 acres of Desert Tortoise habitat, of which 32,000 acres are crucial (13% of Chuckwalla habitat). Loss of 24,300 acres of Prairie Falcon foraging area utilized by 3 nesting pairs, within 5 to 10 years. Loss of 17,300 acres (21%) of seasonal range of Orocopia Mtn. Desert Bighorn Sheep herd of 40 individuals. Decline and eventual extinction of population. Loss of 3,460 acres (14%) of desertwide total of Desert Shrew habitat.	Negative impacts expected to 380 prehistoric and 25 historic sites. 640 acres of very high and 5,120 acres of high sensitivity / significance may suffer.	Very significant impacts on 5% of area; significant impacts on a further 5%.	This new open area would provide an additional 69,120 acres of opportunities and experience for ORV free play and competitive events. Reduced hunting opportunities. Sightseeing opportunities for floral displays reduced. Reduction in opportunities for scientific and educational study. Reduction in opportunities for primitive recreation.
		Blythe (15)			
Increased compaction, wind and water erosion, and dust production.	Impacts similar to Johnson and Stoddard Valleys. Total area impacted would be 289,408 acres. Probable permanent loss of plant biomass due to ORV activity should be about 174,000 tons throughout the entire area. Two RT&EPs impacted: *Ditaxis adenophora* and *Colobrina californica*. No UPAs impacted.	Loss of 235,000 acres of Desert Tortoise habitat, of which 92,000 acres are considered crucial habitat (40% of Chuckwalla critical habitat) within 10 to 15 years or less.	Important cultural resource area in which 1,900 prehistoric and 200 historic sites are predicted and which could be destroyed or severely impacted.	Significant visual impacts on 10% of area.	ORV use would not increase due to distance from urban areas. Reduced hunting opportunities. Non-ORV oriented campground users would be negatively impacted (Wiley Well, Coon Hollow).

Table MV-4 (cont.)

Soil	Vegetation	Wildlife	Cultural	Visual Resources	Recreation
		Loss of 33,000 acres from parts of foraging area of 5 pairs of Prairie Falcons and potential loss of 5 nesting pairs of birds through decrease in foraging areas by 3 to 50% per year. Loss of 11,100 acres of seasonal range for Desert Bighorn Sheep in Chuckwalla Mtns. (10% of habitat); herd is already in critical condition and may become extinct. Loss of 71,680 acres (6%) of desertwide habitat for Mojave Fringe - toed Lizard. Loss of 12,800 acres of Mule Deer habitat for estimated herd of 50 deer in Mule Mtns. Also, loss of 23,000 acres of concentration area (20%) for 150 deer in Chuckwalla and Little Chuckwalla Mtns. Loss of two crucial roosts for California Leaf - nosed Bat and one for Pallid Bat in Mule Mtns. Severe impacts and potential destruction to Chuckwalla Valley Dune Thicket proposed ACEC. Severe impacts to Corn Springs ACEC from added recreation pressures. Potential deterioration of and permanent habitat losses to proposed ACECs, Chuckwalla Bench and Milpitas Wash. Loss of 193,280 acres (22%) of Couch's Spadefoot habitat in CDCA.	The concentration of rock art sites as ritual localities would be disturbed. Intaglios, petroglyphs, pictographs, and the ethnographically located trading center would be severely degraded. Indian trails would be destroyed. Based on known sites, 14,080 acres have a very high cultural resource sensitivity / significance and 37,120 acres have high significance. 50 linear miles of significant historic roads and trails crosscut the polygon. Potential for buried / Early Human sites within 32,000 acres of polygon. Overall impacts expected to be extremely severe.		This new open area would provide an additional 284,800 acres of opportunities for ORV free play and competitive events.
		McCoy Valley (16)			
Increased compaction, wind and water erosion, and dust production.	Impacts on vegetation similar to Johnson and Stoddard Valleys. Total area impacted would be 109,632 acres. Probable permanent reduction of plant biomass could be 66,000 tons throughout entire area. One RT&EP is known in this area — *Colubrina californica*. No UPAs are known in this area.	Loss of 3,500 acres of Mule Deer population concentration area on southeastern slopes of Big Maria Mtns. Loss of 111,360 acres (12%) of Couch's Spadefoot habitat in CDCA. Loss of 3,200 acres (8%) of transient range for Desert Bighorn Sheep in Palen Mtns. and 1,900 acres (2%) of transient habitat in Big Maria Mtns. Potential for much greater loss through increased human use and unauthorized extension of open area. Loss of 1,728 acres (30%) of Ford Dry Lake system, a proposed ACEC for important water fowl habitat. Loss of 13,000 acres (73%) of entire McCoy Wash ecosystem, a proposed ACEC for a limited, sensitive habitat of high wildlife diversity.	1,472 acres of polygon have high known cultural resource values. Both proposed Sundesert and McCoy Springs National Register properties could partially be impacted within this zone. 425 prehistoric and 40 historic sites could be impacted. Overall impacts considered severe to irreversible. Permanent village sites and burial areas would be severely impacted.	Significant visual impacts on 5% of area.	Milpitas Wash would lose its good - to - excellent hunting qualities as well as its excellent birding opportunities. This new open area would provide an additional 113,280 acres of opportunities and experiences for ORV free play and competitive events.

Table MV-4 (cont.)

Soil	Vegetation	Wildlife	Cultural	Visual Resources	Recreation
		Arroyo Salada (17)			
No data.	Impacted area covers 11,712 acres. Not enough data available to predict biomass reduction, but could be between 0.3 and 0.6 ton/acre. No RT&EPs known to occur within this open area. No UPAs known to occur within this open area.	Loss of 5,800 acres of Borrego crucial habitat for Flat - tailed Horned Lizard. Loss of 1,900 acres (3 to 7.5%) of foraging area for one pair of Prairie Falcons. Potential impacts to nest site are high. Potential deleterious impacts to possible critical lake shore habitat along Salton Sea (Desert Pupfish, Bald Eagle, Brown Pelican). Loss of 16,640 acres (3%) of Colorado Fringe - toed Lizard habitat. Loss of 16,640 acres (0.1%) of Desert Kangaroo Rat habitat.	At least 300 archaeological sites could be subject to very high probability of destruction. 4,480 acres of polygon have a high sensitivity / significance. 2 linear miles of significant historic trails could be impacted. There is a very high potential for buried sites within the entire polygon. Impact potential in this zone is very high.	No visual impact.	Two rockhound sites would be impacted by damage to fossils. This new open area would provide an additional 11,520 acres of opportunities for ORV free play and competitive events.
		North Algodones Dunes (18)			
Sandy soils not significantly impacted nor would dust be produced.	Impacts similar to Gecko Campground (see Balanced Alternative). Total areas impacted would be 14,528 acres. Rare, Threatened and Endangered Plants and UPAs same as Gecko Campground on Balanced Alternative.	Loss of 15,400 acres (7.8%) of habitat for 8 and possible 12 species of endemic beetles and rare moths and butterflies. Loss of 15,400 acres of Colorado Fringe - toed Lizard habitat (3% desertwide) in 5 to 10 years. Deleterious influence on transient range of Coyote Mtn. Peninsular Bighorn Sheep habitat; potential loss of range. Destruction of southern part of ecotone between western Colorado Desert and southern coastal communities; important zone of intergradation and hybridization. Loss of 2,240 acres (0.3% desertwide) of Couch's Spadefoot Toad habitat. Potential deleterious impacts to East Mesa Black Rail habitat. Loss of 11,520 acres (0.7%) of desertwide habitat of Desert Kangaroo Rat.	1,920 acres of very high and 640 acres of high cultural sensitivity / significance could be impacted. Potential for important buried, Early Human sites within 3,840 acres of polygon is high and these could be disturbed. At least 45 prehistoric sites could possibly be disturbed. Kamia hunting area, Diegueno, Yuma and Maricopa Mythic association areas would be severely impacted.	No visual impact.	Ten educational institutions would decrease their use of the area. An increase in the size of this existing open area (5,120 acres) would provide additional opportunities and experiences for ORV use.
		Plaster City (19)			
Same as Balanced Alternative.	See Balanced Alternative; 41,472 acres would be impacted.	Loss of 35,000 acres of Flat - tailed Horned Lizard habitat in 10 to 15 years. Loss of 12,800 acres (or 2%) of Colorado Fringe - toed Lizard habitat in 5 to 15 years.	Severe impacts can be expected to: — an estimated 1 site per 80 to 130 acres. — 1,280 acres of high sensitivity / significance.	Significant impacts on 3% of open area.	A reduction in existing open area size (2,560 acres) and an increase in projected user density would decrease opportunities and experiences for ORV free play and competitive events.

Table MV-4 (cont.)

Soil	Vegetation	Wildlife	Cultural	Visual Resources	Recreation
		Major destruction to several Colorado Desert ecosystems found nowhere else in U.S., i.e., high percentage of Smoke Tree Wash community; creosote - desert holly pavement cut with wash stringers. Deleterious influence on transient range of Coyote Mtn. Peninsular Bighorn Sheep habitat; potential loss of range. Destruction of southern part of ecotone between western Colorado Desert and southern coastal communities; important zone of intergradation and hybridization.	— 2 linear miles of Fages - DeAnza Trail - Emigrant Road National Register property. — 1,920 acres of proposed Yuha Basin National Register property.		
Yuha (20)					
Same as Balanced Alternative.		Loss of 640 acres of prime Flat - tailed Lizard habitat (1% of crucial habitat). Loss of 640 acres of Colorado Fringe - toed Lizard habitat (0.1% of desertwide habitat).	See Balanced Alternative.	See Balanced Alternative.	This new open area would provide an additional 640 acres of opportunities and experiences for competitive ORV events by furnishing staging and pit areas.
South Algodones Dunes/Gecko Campground (21A)					
Sandy soils would not be significantly impacted nor would dust be produced.	Impacts similar to Buttercup, but spread out over 130,240 acres. Same RT&EPs impacted as Buttercup on Balanced Plan and, in addition, *Astragalus lentiginosus* var. *borregoensis*. About 80% of Algodones UPA impacted.	Loss of 149,800 acres (77.2%) of total habitat of 8 and possibly 12 species of endemic moths and rare butterflies. Loss of 149,800 acres (19%) of total habitat of Colorado Fringe - toed Lizard in 30 to 40 years. Loss of 48,000 acres or 6% of known habitat of Couch's Spadefoot Toad in CDCA. Loss of 124,000 acres (7%) of habitat for Desert Kangaroo Rat. Damage to and losses of 6,400 acres (22%) of the Indian Wash proposed ACEC for unique and high diversity wildlife habitat in 5 to 10 years.	Potential impacts to: 3,840 acres of very high cultural sensitivity / significance. At least 150 prehistoric surface sites, including 50 to 75 within a small portion of the polygon. Same Native American significance as North Algodones open area.	No visual impact.	Some opportunities for scientific and educational research may be lost.

Table PE - 7

SUMMARY OF UTILITIES ELEMENT IMPACTS

Resource	No Action Alternative	Protection Alternative	Balanced Alternative	Use Alternative
Air	◑	◑	◑	●
Water	◑	◑	◑	●
Soil	◑	◑	◑	●
Vegetation	◑	◑	◑	●
Wildlife	●	◑	●	●
Cultural	●	⦶	○	◑
Native American	●	⦶	○	◑
Wilderness	◑	○	○	○
Visual	●	◑	◑	●
General Recreation	○	◑	○	◑
Motorized Vehicle	○	○	○	○
Grazing	○	○	○	○
Burros	○	○	○	○
Social Factors	○	○	○	○
Economic Factors	○	●	◑	○

• LEGEND •

○ No significant impact
⦶ Positive impact
⊕ Highly positive impact
◑ Negative Impact
● Highly negative impact

Note: The No Action Alternative assumes present BLM management, actual livestock use, and that wild horse and burro numbers will remain unchanged over the next 20 years (see page 31 of the plan for a more complete explanation).

The Protection, Balanced, and Use Alternative columns indicate impacts anticipated in the next 20 years when an alternative is compared against existing 1980 conditions.

IMPACTS OF THE ENERGY / UTILITY ELEMENT

Significant impacts would result from the construction, operation, and maintenance of major public utilities provided for in this element. The impacts described in the following pages indicate the maximum potential impact for each plan alternative. Full development of all corridors or sites is not expected as many represent optional locations which differ in availability by alternative. Development of corridors and sites may not occur by the year 2000. To supplement the overall comparison of the impacts of each alternative, a summary of resource values subject to potential risk of impact in each utility corridor and site is provided (see Tables UC-1, KGRA-1, 2, 3, WS-1, 2, 3, and MW-1, 2 following narrative discussion).

* * *

● On Air Quality. Significant impacts to air quality will occur mainly from power plant development and operation. The proposed geothermal power plants may cause some deterioration of air quality in the vicinity of the plant sites. This deterioration is mainly the result of small amounts of hydrogen sulfide emitted during well drilling and plant operations. Impacts of these emissions are the same for the No Action, Protection, and Balanced Alternatives, since the number and location of plant sites is the same for each. Despite these increased pollutant invasions, ambient air quality levels will not be significantly deteriorated by these plants. In the Use Alternative additional geothermal power plants are proposed. The air quality impact of these additional units cannot be predicted without additional studies; however, it is expected that further increases in pollutant emissions will degrade air quality to some degree.

Pollutant emissions from a major coal-fired power plant are substantial even with the application of the best available pollution control devices. Emissions of sulfur dioxide and nitrogen oxides from single plant may exceed current emissions in the entire CDCA. Given the magnitude of these emissions, extensive air quality and meteorological studies will need to be conducted at each proposed plant site to determine the air quality and visibility impacts. The potential impacts under the Use Alternative are greater than for the other alternatives due to a likelihood of more power plants.

● On Water Resources. Surface disturbances resulting from utility related construction may alter water runoff characteristics. Generally, the soil compaction and construction of hard surfaces associated with utility development will tend to increase runoff and erosion. It is not expected, however, that this will significantly impact beneficial uses of surface water sources in the desert.

The construction of aqueducts within planned utility corridors would impact water resources beneficially by increasing water availability and decreasing demand on desert water supplies.

The operation of power plants constitutes a major use of water and poses a significant potential impact to water resources. If groundwater is used, it is likely that overdraft of groundwater supplies would result. In addition, the waste generated from power production would pose a threat to water quality. Since approximately the same number of power plants would be developed in all alternatives, the potential for negative impact is similar.

Potential impacts to groundwater resources were evaluated by overlaying a map of the Energy Element potential Power Plant Siting Regions (PPSRs) on a map of identified groundwater basins and areas of groundwater storage (California OWR, 1975). Some groundwater basins were eliminated from the analysis because they are not within PPSRs or are unsuitable for power plant requirements due to low well yields (500 gpm minimum), inadequate storage (900,000 acre feet), or poor water quality (30,000 mg/1 TDS). The water resources of the remaining basins were categorized as either being used or as being extensively developed. These basins are identified in the following table. The number of basins in each category by plan alternative is identified in the Cumulative Impacts

Section of this EIS. Quantification of impacts cannot be completed without a detailed analysis of site specific power development plans.

Table PE-8

WATER RESOURCES IMPACTS OF POWER PLANT SITING

Basins within PPSRs	Basin Description ED (Extensive Development) EU (Existing Use)	Basins Affected by Alternative Use	Balanced	Protection
6-22 Upper Kingston Valley	EU	X	X	X
6-33 Soda Lake Valley	EU	X	X	
6-37 Coyote Lake Valley	EU	X	X	X
6-38 Caves Canyon Valley	EU	X	X	X
6-39 Troy Valley	EU	X	X	
6-40 Lower Mojave Valley	ED	X	X	X
6-41 Middle Mojave Valley	ED	X	X	
6-42 Upper Mojave Valley	ED	X		
6-43 El Mirage Valley	ED	X	X	
6-46 Fremont Valley	ED	X		
6-47 Harper Valley	EU	X	X	
6-50 Cuddeback Valley	EU	X	X	X
6-54 Indian Wells Valley	ED	X		
7-4 Rice Valley	EU	X	X	
7-5 Chuckwalla Valley	EU	X	X	
7-18 Johnson Valley	EU	X	X	X
7-19 Lucerne Valley	ED	X	X	X
7-25 Ocotillo Valley	EU	X	X	
7-29 Coyote Wells Valley	EU	X	X	
7-30 Imperial Valley	ED	X		
7-37 Arroyo Seco Valley	EU	X	X	
7-38 Palo Verde Valley	ED	X	X	

● On Soils. Impacts to soils from utility construction, operation, and maintenance include disruption of soil, increased wind and water erosion, and compaction. The same type of impacts would occur in all alternatives, since the same degree of development to meet projected utility needs is common to all alternatives. Potential for disturbance would be increased, however, in proportion to the amount of land available for development.

An unlimited amount of CDCA land is exposed under the No Action Alternative since no utility planning corridors are proposed. The Protection Alternative contains approximately 2,150,000 acres of utility corridors and 13,000 acres of wind generation sites which would be exposed to impacts.

The Balanced Alternative contains approximately 2,875,000 acres of utility corridors and about 37,000 acres of wind generation sites.

The Use Alternative contains approximately 4,275,000 acres of utility corridors and 77,000 more acres of wind generation sites.

● On Vegetation. Impacts to vegetation would result from all types of utility construction, operation, and maintenance.

In the No Action Alternative right-of-way or plant site selection is accomplished on a case-by-case basis. The siting location is unknown and therefore impacts to known vegetation resources are unknown. Vegetation would be adversely impacted, but to an undetermined degree.

In the Protection Alternative unique plant assemblages (UPAs) could be impacted by utility site construction. Thirty-three Rare, Threatened, or Endangered plant species could be potentially impacted by utility development. Nine UPAs could be impacted in five different corridors. Seventeen Rare, Threatened, or Endangered species could be impacted in 9 different corridors.

In the Balanced Alternative, UPAs could be impacted at 5 potential generating sites. Forty Rare, Threatened, or Endangered species could be impacted. Development of three KGRAs could impact 8 Rare, Threatened, or Endangered plant species. Nine UPAs could be impacted in 5 different corridors if development occurred. Seventeen Rare, Threatened, or Endangered species in 36 collecting sites in 10 proposed corridors could be subject to impacts.

In the Use Alternative, 15 UPAs in 11 generating sites could be impacted, along with 36 Rare, Threatened, or Endangered species on 26 sites near 9 potential power plant sites. Twenty Rare, Threatened, or Endangered species in 42 collection sites could be impacted in 13 corridors.

In addition to the above impacts on key vegetation resources, development impacts would also occur to the general vegetation. Vegetation losses could be 1,800 to 3,600 lbs./acre over 15,000 to 39,000 acres for each power plant site.

● On Wildlife. The establishment of broad utility corridors and energy plant site regions precludes the assessment of specific impacts. The figures below represent the sum total of potential habitat loss and degradation (in millions of acres) from all corridors combined. Impacts may be less than 20 percent of this total area, but the actual figure will vary with the choice of corridors. (Estimates for the No Action Alternative are not shown since development is currently handled on a case-by-case basis; however, negative impacts would probably be more extensive than in the Use Alternative due to the wide flexibility under this alternative).

Table PE-9
POTENTIAL HABITAT LOSS AND DEGRADATION
BY PROPOSED UTILITY CORRIDORS
(millions of acres)

	PROTECTION	BALANCED	USE
Rare or Endangered	0.5	0.8	1.2
Sensitive	1.0	2.0	2.9
Significant	0.7	1.0	1.6
Habitats	0.4	0.6	0.9
Totals	2.6	4.4	6.6

The amount of habitat lost depends upon the extent to which each region is developed and the type of utility. Habitat loss, soil and vegetation disturbance, and displacement of animals would occur in all cases where construction occurs. Noise produced by all activities, is a particular problem with fossil fuel and wind generation plants, and may cause wildlife community shifts favoring noise-tolerant species. Contamination of surface and subsurface water resources can become problems at geothermal, fossil fuel, and nuclear sites. Atmospheric pollutants, such as heavy metals, radioactive materials, and non-condensable gases, are common by-products of fossil fuel and geothermal plants. These pollutants may negatively affect areas outside of the immediate plant site (e.g., "acid rain") and are difficult to pinpoint. Such by products can be immediately toxic to organisms on contact or later may cause decreased germination rates, seedling survival, and survival of invertebrates at all stages of development. The effects of these toxins are eventually concentrated at higher trophic levels (e.g., DDE, a metabolite of DDT, causes eggshell thinning in some bird species). The effects vary with each toxin. General cumulative effects on wildlife resources include soil and vegetative contaminations and disruptions in food chains. Transmission line construction can result in disturbance of reproductive behavior in many animals (notably Bighorn Sheep) and localized changes in vegetation. Positive effects may include the creation of additional perch or nesting sites for resident and migratory birds.

All alternatives of the Energy Production and Utility Corridors Element involve similar types of negative impacts, differing only in degree. The No Action Alternative potentially would expose all wildlife in the CDCA to impacts. The Use Alternative would affect the greatest total area and number of species (37). For example, 68 percent of the Mohave Ground Squirrel range in the CDCA is contained within corridors specified in the Use Alternative, where construction may result in loss of habitat and declines in carrying capacity for this species. Similarly, the Golden Eagle would be potentially impacted in 23 percent of its breeding and foraging areas. Also, the potential for residual effects from power plant operation would be greater in this alternative due to more flexible power plant siting options. Overall impact of the Use Alternative on wildlife would be highly negative.

Portions of the ranges of 31 listed, sensitive and significant species would be potentially negatively impacted in the Balanced Alternative, including 53 percent of Mohave Ground Squirrel habitat and 14 percent of Golden Eagle range. Potential areas for power plants would be only 50 percent of that available in the Use Alternative, thus decreasing potential residual impacts. Overall impact on wildlife would still be highly negative, but less so to desertwide wildlife resources than the Use Alternative.

Of the thirty species of concern which would be potentially impacted in the Protection Alternative, the Mohave Ground Squirrel and Golden Eagle would be affected on 25 percent and 9 percent of their respective ranges in the CDCA. Power plant siting options would be reduced to 7 percent of those areas available for development in the Use Alternative, which would reduce residual impacts. Overall impacts of the Protection Alternative of the Energy and Utility Element would be negative. However, habitat degradation or loss from utility construction and development would be least under this alternative.

● On Cultural and Native American Resources. Potential impacts may be anticipated to 32,000 or more prehistoric and historic sites within utility corridors under the Use Alternative. The Balanced Alternative would jeopardize 20,000 or more prehistoric and historic sites, and 14,500 or more sites would be jeopardized under the Protection Alternative. These figures include only the potential for direct damage to prehistoric and historic cultural sites not indirect damage.

Total areas of very high Native American value which could be directly impacted by actions related to this element include 77,440 acres in the Protection Alternative, 142,080 acres in the Balanced Alternative and 230,400 acres in the Use Alternative. Additional impacts could also occur indirectly to areas of ritual and religious value.

Impacts include both the direct damage or destruction of cultural materials and indirect impacts, such as increased erosion and access to areas of sensitive resource. Many Native American groups consider electrical power production and transmission to have a particularly serious adverse effect on areas of religious and ritual importance.

A problem related to facility development is the limited opportunity for mitigating impacts. Mitigation is usually only applied to areas of direct impact. Impacts to areas of cultural value, such as the visual intrusion of transmission facilities upon a natural environment are especially difficult to mitigate. Impacts such as the visual impact of utility facilities, secondary impacts due to increased access and increasing erosion, and natural deterioration of cultural sites are cumulative. These types of impacts positively correlate with the density and extent of facility construction (Lyneis and Weide 1979). Mapping, surveys, and construction can also indirectly alter the surface, either by establishment of new roads, by drill operations, or through unauthorized collecting, increased accessibility (new roads), and increased worker/visitor use of the area. The major effect of these unregulated activities would be the partial or total destruction of existing archaeological or historical sites in the areas of surface alteration. The intensity of development relative to the location of archaeological and historical values would determine the degree of impact, which might range from little or no significance to total destruction of the resources.

● On Visual Resources. Generally, unrestricted development as would occur in the No Action Alternative would result in highly negative impacts. Potential impacts between other alternatives vary. In the Protection Alternative, approximately 44 percent of the CDCA would be impacted visually, while 51 percent in the Use Alternative and 46 percent in the Balanced Alternative would be impacted.

Potential impacts are attributed to all alternatives and are based on the following descriptions of the major utility structures contemplated in the plan alternatives. Geothermal power facilities are low, with few tall projections, and may include roads, transmission lines, and ancillary buildings. Wind generation facilities are composed of tall towers with large rotating blades located in clusters, plus associated support and transmission facilities. Utility corridors may contain overhead electrical transmission lines as well as pipelines, roads, and other surface or underground facilities. Microwave towers and associated support facilities are composed of the tower itself, support buildings, fencing, and roads. Power plants are large structures with stacks, transmission lines, and support facilities.

Although contrasts can be reduced and impacts mitigated, the mass of projected facilities would in most cases result in negative impacts to visual resources. Many projects produce serious local impacts, but because of vast areas involved, their overall effects are diminished.

● On Wilderness. The No Action Alternative would result in continued degradation of wilderness values and opportunities throughout the CDCA.

There would be no significant direct impact to wilderness values or opportunities within designated wilderness areas as a result of any of the alternatives. Utility corridors in Class L areas adjoining designated wilderness areas would possibly degrade wilderness areas. This element would also contribute to the loss of wilderness values outside of designated wilderness areas.

● On General Recreation. None of the alternatives would have significant impacts on a desertwide basis. However, some opportunities for recreation would be lost on a site-by-site basis as a result of power plant siting and geothermal development. Some positive impacts to recreation would result from more service roads for transmission lines; these would provide additional access.

● On Vehicle-Oriented Recreation. Some opportunities for vehicle recreation would be lost as a result of power plant siting and geothermal development in all alternatives. Construction of power transmission service roads would increase access and thus opportunities for competitive use and vehicle touring. However, the challenge and experience on these roads would not be great. The roads would be too well-engineered to offer variety and would pose a hazard to the competitive user because attainable speeds would be unsafe. Other developments would have little effect on vehicle-oriented recreational experiences.

● On Socioeconomic Values. All alternatives provide adequate transmission for all of the proposed power generation projects involving power transmission across the CDCA. The difference between the alternatives is the degree of flexibility in route selection available for new facilities. The amount of new transmission line construction necessary for known proposed projects would not differ significantly between alternatives. The main effect is on system reliability: concentration of facilities tends to reduce system reliability. The effect on reliability is not predictable in quantified terms.

Under the No Action Alternative, about 60 percent of the area having high wind power potential would be developable, and most of the geothermal resource would be leasable. The areas not leasable would be at Randsburg and Saline Valley. All of the California Energy Commission approved potential power plant siting regions would be available except the Ivanpah Valley.

About one-half of the East Mesa area in Imperial County would be leasable for geothermal purposes under the Protection Alternative. The rest of the areas having geothermal potential would be dominated by the non-leasing C and L management classes. This would include forgoing the potential for 650 megawatts (Mw) in the Coso KGRA. About 20 percent of the high wind power potential area would be developable. The Rice, Cadiz, and Ivanpah potential power plant siting regions would not be available.

Under the Balanced Alternative the following geothermal areas would be developable: half of Coso Area, Ford Dry Lake, Southwest Salton Sea, East Mesa, Yuha, Pisgah Crater, Bristol-Amboy, and half of Tecopa Area. This includes the areas having the highest potential. About 30 percent of the area having high wind potential would be developable. The Ivanpah power plant siting region would not be open.

All of the geothermal potential areas would be dominated by management classes M and I permitting leasing under the Use Alternative. This alternative would permit development of about 60 percent of the high wind potential areas and all of the power plant siting regions.

In addition to the above, plan amendments would be required for the construction of the necessary power transmission lines in order to develop any wind, geothermal, or conventional power plant located on BLM-administered land under any alternative. The exceptions include the Sundesert site, which has an approved corridor regardless of the alternative chosen, and all sites under the No Action Alternative which has few restrictions on corridor placement.

Table UC-1

UTILITY CORRIDORS ELEMENT
PROTECTION/BALANCED/USE ALTERNATIVES[a]

Soil	Vegetation	Wildlife	Cultural	Visual Resources[b]	Recreation
		Corridor A			
Low impact to soil because of existing facilities such as access roads and tower sites.	R, T, and E plants Hermizonia arida (3 sites) Chorizanthe spinosa (4 sites).	Potential impacts on: State-listed Rare species (1) - 225,000 acres. Sensitive species (3) - 96,000 acres. Significant species (4) - 64,000 acres. Unique habitats (3) - 46,500 acres.	Potential impacts to: 13,440 acres of very high and 10,880 acres of high cultural resource sensitivity/significance. 48,000 acres with a very high probability of buried sites. 73 linear miles of significant historic roads and trails. 1,400 prehistoric and 125 historic predicted sites. 3 National Register properties (all of Bandit Rock (Robbers Roost) and proposed Fossil Falls Archaeological District and 10% of the Last Change Canyon District).	Significant cumulative impact to 21 miles. Very significant impact to 6 miles. 1 line added to existing.	Potential reduction in opportunities and experiences to observe floral displays on 17,900 acres. Potential adverse impact to semi-primitive (MUC-L) opportunities and experiences along 74 miles of corridor.

a) Twenty-eight utility planning corridors have been identified. The Protection Alternative includes corridors "A" through "O"; the Balanced Alternative, "A" through "T"; and the Use Alternative, "A" through "BB". In some cases, corridor width varies between alternatives (see Table E-1, Energy Production and Utility Corridor Element.

b) Impacts expressed in linear miles.

Table UC-1 (cont.)

Soil	Vegetation	Wildlife	Cultural	Visual Resources	Recreation
		Corridor B			
Low impact to soil because of existing facilities such as access roads and tower sites.		Potential adverse impacts on: State-listed species (1) - 24.250 acres.	Low to moderate potential for buried/Early Human sites. Six linear miles of an important historic trail could be impacted as could at least 150 prehistoric and 20 historic sites. Overall impacts expected to be moderate within the corridor.	No inventory of visual values made. Private land predominates.	
		Corridor C			
Low impact to soil because of existing facilities such as access roads and tower sites.		Potential adverse impacts on: State-listed Rare species (2) - 48,500 acres. Sensitive species (2) - 25,000 acres. Significant species (4) - 20,000 acres.	Impacts are possible to a predicted 215 prehistoric and 30 historic sites. Overall impacts are expected to be low.	No inventory of visual values made. Private land predominates.	Potential reduction in opportunities and experiences to observe floral displays on 14,000 acres.
		Corridor D			
Low impact to soil because of existing facilities such as access roads and tower sites.	UPA's: Shadow Valley Joshua Trees	Potential adverse impacts on: State-listed Rare species (1) - 10,250 acres Sensitive species (4) - 59,500 acres Significant species (4) - 29,500 acres Unique habitats (3) - 21,750 acres	Potential impacts to: 8,320 acres of very high and 13,440 acres of high cultural resource sensitivity/significance. 2,100 prehistoric and 250 historic predicted sites. 101,120 acres of area with a very high likelihood of buried/Early	No visual impact.	Potential reduction in opportunities and experiences to observe floral displays on 5,700 acres. Potential adverse impact on 2,600 acres of interpretive/educational opportunities and experiences. Potential adverse impact to semi-primitive

Table UC-1 (cont.)

Soil	Vegetation	Wildlife	Cultural	Visual Resources	Recreation
			Human sites. 77 linear miles of significant historic roads and trails.		opportunities and experiences (MUC-L) along 85 miles of corridor in the balanced alternative.
		Corridor E			
Low impact to soil because of existing facilities such as access roads and tower sites.	R, T, and E's: Coryphantha vivipara var. alversonii (1 site)	Potential adverse impacts on: Sensitive species (2) 110,000 acres Significant species (1) 90,250 acres	Impacts could be severe to 12,160 acres of very high and 14,720 acres of high cultural resource sensitivity/significance. 40,960 acres of area have a very high likelihood of buried/Early Human sites. At least 860 prehistoric and 100 historic sites are predicted within the corridor. In addition, 8 miles of significant roads and trails cross over the corridor. 50% of the Piute Pass National Register District could be disturbed.	Significant cumulative impact to 15 miles. Very significant cumulative impact to 16 miles. 3 lines assured.	Potential reduction on 17,300 acres of sightseeing opportunities and experiences to observe floral displays. Potential adverse impact on 7,000 acres of interpretative/educational opportunities and experiences. Potential adverse impact to semi-primitive (MUC-L) recreation opportunities and experiences along 128 miles - protection alternative 57 miles - balanced alternative 10 miles - use alternative.
		Corridor F			
Approximately 75% of area contains soils highly sensitive to surface disturbance. Disruption of soil in trenches.		Potential adverse impacts on: Sensitive species (1) 3,200 acres Significant species (1) 2,500 acres	2,560 acres of very high and 3,840 acres of high cultural resource sensitivity significance	Significant cumulative impact to 7 miles.	Potential reduction in sightseeing opportunities and experiences for floral displays on 12,800 acres.

Table UC-1 (cont.)

Soil	Vegetation	Wildlife	Cultural	Visual Resources	Recreation
increased compaction, wind erosion, and water erosion.			stand to be impacted. 10,240 acres of corridor contain a high to very high potential for buried and perhaps Early Human sites. This corridor could destroy in part or entirely at least 230 prehistoric and 10 historic sites. Overall impacts expected to be moderate.		Potential increase in recreation opportunities and experiences due to increased access. Potential adverse impact to semi-primitive (MUC-L) recreation opportunities and experiences along 23 miles - protection alt. 7 miles - balanced alt. 0 miles - use alt.
		Corridor G			
Disruption of soil in trenches, increased compaction, wind erosion and water erosion.	R, T, and E's: Chorizanthe spinosa Cymopteris deserticola UPA's: Atriplex spinifera, Crucifixion thorn stands.	Potential adverse impacts on: State-listed Rare species (1) - 82,000 acres Sensitive species (3) - 225,250 acres Significant species 74,250 acres Unique habitats 50,000 acres	Most severe damage can be predicted to the 10,880 acres of very high and 16,640 acres of high cultural resource sensitivity/significance. 88,960 acres have potential for buried/Early Human sites so subsurface activities could adversely affect these. No fewer than 500 prehistoric and 60 historic sites might be partially or entirely destroyed. Two potential National Register sites could be further degraded, as could 17 linear miles of historic roads and trails.	Significant cumulative impact - 50 miles. Very significant cumulative impacts - 14 miles. 3 lines assumed.	Potential reduction in sightseeing opportunities and experiences for floral displays on 30,700 acres. Potential adverse impact on 8,300 acres of interpretive education opportunities and experiences. Potential adverse impact to semi-primitive (MUC-L) recreation opportunities and experiences along 59 miles of corridor in the balanced alt. 14 miles of corridor in the use alt. 194 miles of corridor in the protection alt.

Table UC-1 (cont..)

Soil	Vegetation	Wildlife	Cultural	Visual Resources	Recreation
		Corridor H			
Disruption of soil in trenches, increased compaction, wind erosion and water erosion.	UPA's: Stepladder Mtn. Teddy Bear Cholla Creosote bush rings E. Ord Mtn. Jojoba	Potential adverse impacts on: State-listed Rare species (1) - 7,700 acres Sensitive species (3) - 62,500 acres Significant species (2) - 103,500 acres Unique habitats (5) - 33,250 acres	17,920 acres of very high and 14.720 acres of high sensitivity/ significance could be damaged. The potential for buried and Early Man sites occur over 60,800 acres of area. No less than 7 Early Human sites are currently known and these could all be destroyed.	Significant cumulative impact - 40 miles. Very significant cumulative impact - 17 miles. Three new lines assumed.	Potential reduction in sightseeing opportunities and experiences for floral displays on 3,200 acres. Potential adverse impact on 6,400 acres of interpretive/education opportunities. Potential adverse impacts to semi-primitive (MUC-L) recreation along 11 miles of corridor in the balanced alt., 26 miles of corridor in the use alt., and 92 miles of corridor in the protection alt.
		Corridor I			
Low impact to soil because of existing facilities such as access roads and tower sites.		Potential adverse impacts on: Sensitive species (1) - 44,800 acres Unique habitats (1) - 43,500 acres	The most severe disturbance could occur to 5,120 acres of very high and 3,200 acres of high sensitivity/ significance, and 375 prehistoric and 40 historic predicted sites. No less than two Early Human sites are known or predicted to be disturbed. Overall impact predicted to be	Significant cumulative impact - 11 miles. Very significant cumulative impact - 8 miles. 1 new line assured.	Potential reduction in sightseeing opportunities and experiences for floral displays on 2,600 acres. Potential for adverse impacts to semi-primitive (MUC-L) opportunities and experiences along 30 miles of corridor in the balanced alt., 10 miles of corridor in the use alt.,

Table UC-1 (cont.)

Soil	Vegetation	Wildlife	Cultural	Visual Resources	Recreation
			moderate.		and 48 miles in the protection alt.
		Corridor J			
Low impact to soil because of existing facilities such as access roads and tower sites.	R, T, and E plants: Corypantha vivipara var. alversonii (1 site) Opuntia wigginsii (1 site) Ditaxis adenophora (1 site)	Potential adverse impacts on: Sensitive species (3) - 43,500 acres Significant species (5) - 6,400 acres Unique habitats (7) - 40,300 acres	Potential or partial impacts to: 9,600 acres of very high and 14,080 acres of high sensitivity/ significance. 92,160 acres of area with high to very high likelihood of buried sites. No fewer than 20 predicted Early Human sites. At least 1,425 prehistoric and 200 historic sites. 75% of the Sun-desert Archaeological National Register District. 6 linear miles of significant roads and trails.	Significant cumulative impact - 28 miles, very significant cumulative impact - 26 miles. 2 new lines assumed.	Potential reduction in sightseeing opportunities and experiences for floral displays on 2,000 acres. Potential adverse impacts on opportunities and experiences for interpretation/ education on 12,800 acres. Potential for adverse impact to semi-primitive (MUC-L) opportunities and experiences along 50 miles of corridor in the balanced alt., 10 miles of corridor in the use alt., and 111 miles of corridor in the protection alt.
		Corridor K			
Disruption of soil in trenches, increased compaction, wind erosion and water erosion.	R, T, and E plants: Ditaxis adenophora (1 site) Ditaxis californica (1 site) UPA's: Palm Oasis - Little San Bernardino Mountains.	Potential adverse impacts on: Sensitive species (4) - 91,000 acres Significant species (4) - 90.750 acres Unique habitats (3) - 29,500 acres	Impacts could be serious to 17,920 acres of very high and 9,600 acres of high cultural resource sensitivity/ significance, and at least 700	Significant cumulative impacts - 102 miles. Very significant cumulative impacts - 12 miles. 2 new lines assumed.	Potential reduction in sightseeing opportunities and experiences for floral display on 39,000 acres. Potential adverse

Table UC-1 (cont.–

Soil	Vegetation	Wildlife	Cultural	Visual Resources	Recreation
			prehistoric and 100 historic sites predicted. The potential for buried and perhaps Early Human sites occur over 36,480 acres of area which could be disturbed by subsurface activities. 35 linear miles of significant roads and trails could be further disturbed. Overall impacts predicted to be moderate.		impacts on opportunities and experiences for interpretative/ education on 4,500 acres. Potential for adverse impact to semi-primitive (MUC-L) recreation opportunities and experiences along 48 miles of corridor in the balanced alt., 9 miles of corridor in the use alt., and 140 miles of corridor in the protection alt.
		Corridor L			
Low impact to soil because of existing facilities such as access roads and tower sites.	R. T. and E plants: Eriogonum deserticola (1 site)	Potential adverse impacts on: Sensitive species (3) - 35,200 acres Significant species (2) - 34,500 acres Unique habitats (1) - 5,120 acres	Potential or partial impacts to: 1,920 acres of high sensitivity/ significance. At least 80 prehistoric and 5 historic predicted sites. 7,040 acres of area with high to very high likelihood of buried sites, including 1 known Early Human site. Numerous areas of Native American value and use.	Significant cumulative impacts - 2 miles. Very significant cumulative impacts - 8 miles. 2 new lines assumed.	Potential for reduction in opportunities and experiences for interpretation/ education on 30,700 acres. Potential adverse impacts to semi-primitive opportunities and experiences (MUC-L) along 10 miles of corridor in the Protection alt., 0 miles in the use and balanced alts.

Table UC-1 (cont.)

Soil	Vegetation	Wildlife	Cultural	Visual Resources	Recreation
		Corridor M			
Approx. 10% of area contain soils highly sensitive to surface disturbance. Increased wind and water erosion and compaction. Approx. 19,200 acres of arable lands.	R, T, and E plants: Eriogonum deserticola (1 site) E. Mesa mesquite stands.	Potential adverse impacts on: State-listed Rare species (1) - 4,500 acres Sensitive species (5) - 46,750 acres Significant species (5) - 45,000 acres Unique habitats (5) - 23,500 acres	62,080 acres of very high and 8,320 acres of high cultural resource sensitivity/ significance. No fewer than 18 Early Human sites are known with a potential for more within an additional 102,400 acres. Development along the Lake Cahuilla Shoreline could impact several National Register sites. 14 linear miles of significant roads and trails could potentially be impacted. No fewer than 1,500 prehistoric or 100 historic predicted sites could be partially or entirely destroyed.	Significant cumulative impacts - 26 miles. Very significant cumulative impacts - 6 miles. 3 new lines assumed.	Potential for reduction in opportunities and experiences for interpretation/ education on 39,000 acres and floral display sightseeing on 13,000 acres. Potential for adverse impact to semi-primitive (MUC-L) opportunities and experience along 11 miles of corridor in the balanced alt., 28 miles protection alt., and 0 miles use alt.
		Corridor N			
Approx. 20% of area contain soils highly sensitive to surface disturbance. Increased wind and water erosion and compaction.	R, T, and E plants: Eriogonum deserticola (2 sites) Pilostyles thurberi (1 site) Lupinus excubitus var. medius (1 site) Bursera microphylla Pholisma arenarium (1 site)	Potential adverse impact on: State-listed Rare species (1) - 38,000 acres Sensitive species (3) - 43,000 acres Significant species (4) - 45,000 acres Unique habitats (3) - 18,000 acres	Disturbance likely to 11,520 acres of very high and 3,840 acres of high resource sensitivity/significance. No fewer than 9 Early Human sites are predicted with possibility for more within an additional	Significant cumulative impacts - 16 miles. Very significant cumulative impacts - 15 miles. 3 new lines assumed.	Potential for reduction in opportunities and experiences for interpretation/ education on 10,000 acres and floral display sightseeing on 1,300 acres. Potential for

Table UC-1 (cont.)

Soil	Vegetation	Wildlife	Cultural	Visual Resources	Recreation
	UPA's: Mtn. Springs Grade Blackbrush Stand Davies Valley Ocotillo-Agave Association		32,000 acres. At least 700 prehistoric and 175 historic sites could be despoiled. 7 linear miles of historic roads and trails could be further impacted. Predicted overall impacts are high.		adverse impacts to semi-primitive (MUC-L) opportunities and experiences along 13 miles of corridor in balanced alt., 8 miles in use, and 26 miles in protection. Potential increase in opportunities and experiences for recreation dependent upon vehicle access.
		Corridor N (Balanced Only)			
	Same as Protection.	Potential adverse impacts on: State-listed Rare species (1) - 5,760 acres Sensitive species (3) - 61,440 acres Significant species (4) - 65,280 acres Unique habitats (1) - 2,560 acres	Same as Protection.	Same as Protection.	Same as Protection.
		Corridor N (Use Only)			
	Same as Protection.	Potential adverse impacts on: State-listed Rare species (1) - 30,500 acres Sensitive species (3) - 126,500 acres Significant species (4) - 140,000 acres Unique habitats (3) - 30,000 acres	Same as Protection.	Same as Protection.	Same as Protection.

Table UC-1 (cont.)

Soil	Vegetation	Wildlife	Cultural	Visual Resources	Recreation
		Corridor O			
Disruption of soil in trenches, increased compaction, wind erosion and water erosion.	No RTE, UPA	Potential adverse impacts on: State-listed Rare species (1) - 6,400 acres Sensitive species (1) - 30,000 acres Significant species (1) - 13,000 acres Unique habitats	640 acres of high cultural resource sensitivity/ significance and 17,280 acres of area with high to very high potential for buried sites could be seriously disturbed. 3 Early Human sites are known and at least 1,450 prehistoric and 150 historic sites can be predicted.	No visual impact.	
Balanced and Use Alternatives include all the above plus the following:					
		Corridor P			
Disruption of soil in trenches, increased compaction, wind erosion and water erosion.	UPA's: Atriplex spinifera	Potential adverse impacts on: State-listed Rare species (1) - 133,000 acres Sensitive species (2) - 100,000 acres Significant species (2) - 24,000 acres Unique habitats (2) - 88,000 acres	1,280 acres of very high and 10,240 acres of high cultural resource sensitivity/ significance. 56,320 acres of high to very high potential for buried sites are predicted. 2 miles of the Twenty Mule Team Road National Register site and 15% of Last Chance Canyon Archaeological District could be further impacted. 4.5 miles of historic roads and trails cross corridor. No fewer than 190	Significant cumulative impact - 25 miles. Very significant cumulative impact - 2 miles. 1 new line assumed.	Potential for reduction to opportunities and experiences for interpretation/ education on 3,800 acres and floral display sightseeing on 14,000 acres.

Table UC-1 (cont.)

Soil	Vegetation	Wildlife	Cultural	Visual Resources	Recreation
			prehistoric and 20 historic sites are expected.		
		Corridor Q			
Disruption of soil in trenches, increased compaction, wind erosion and water erosion.	No RTE, UPA	Potential adverse impacts on: State-listed Rare species (1) - 198,500 acres Sensitive species (2) - 299,000 acres Significant species (1) - 46,000 acres Unique habitats (1) - 160,000 acres	Potential adverse impacts to: 21,760 acres of very high and 33,280 acres of high cultural resource sensitivity/significance. 128,640 acres of area with a high to very high likelihood for buried sites. No fewer than 13 known Early Human sites. 4 miles of the National Register Twenty Mule Team Road. 22 linear miles of significant roads and trails. At least 2,800 prehistoric and 300 historic predicted sites.	Significant cumulative impacts - 15 miles. Very significant cumulative impacts - 9 miles. 2 new lines assumed.	Potential reduction to opportunities and experiences for floral display sightseeing on 7,700 acres.
		Corridor R			
Low impact to soil because of existing facilities such as access roads and tower sites.	No RTE, UPA	Potential adverse impacts on: Sensitive species (2) - 20,000 acres Significant species (1) - 3,200 acres	Concentrated adverse impacts predicted to 640 acres of very high and 640 acres of high cultural resource sensitivity/	Significant cumulative impacts - 25 miles. 2 new lines assumed.	Potential for adverse impacts to semi-primitive opportunities and experiences (MUC-L) along 15 miles of corridor in the

Table UC-1 (cont.)

Soil	Vegetation	Wildlife	Cultural	Visual Resources	Recreation
			significance in addition to 4,480 acres of area with a high likelihood for buried sites. At a minimum 135 prehistoric and 20 historic sites could be despoiled. Predicted overall impacts are low.		
		Corridor S			
Approx. 25% of area contain soils highly sensitive to surface disturbance. Total disruption of soil in canal area, also increased compaction, wind erosion and water erosion. Approx. 32,000 acres of arable lands.	R, T, and E plants: Monardella robisonii (2 sites)	Potential adverse impacts on: (5) - 14,000 acres Significant species (5) - 93,500 acres Unique habitats (1) - 16,500 acres	Serious disturbance likely to 8,320 acres of very high and 640 acres of high cultural resource significance/ sensitivity. Buried/Early Human site potential within 14,080 acres. 2 Early Human sites are known as well as 600 prehistoric and 70 historic sites predicted within area of potential negative impact.	Significant cumulative impacts - 30 miles. Very significant cumulative impacts - 28 miles. 2 new lines assumed.	Potential for reduction in opportunities and experiences for interpretation/ education on 2,600 acres and floral display sightseeing on 17,000 acres. Potential for positive impact to recreation opportunities and experiences dependent upon vehicle access. Potential for adverse impact to semi-primitive opportunities and experiences (MUC-L) along 54 miles of corridor in the balanced alt. and 38 miles of corridor in the use alt.
		Corridor S (Use Only)			
	Same as balanced alt.	Potential adverse impacts on: Sensitive species (5) - 14,000 acres	Same as bal. alt.	Same as bal. alt.	Same as bal. alt.

Table UC-1 (cont.)

Soil	Vegetation	Wildlife	Cultural	Visual Resources	Recreation
		Significant species (5) - 93,000 acres Unique habitats (1) - 16,500 acres			
		Corridor T			
Disruption of soil in trenches, increased compaction, wind erosion and water erosion.	R, T, and E plants: Eriogonum deserticola (1 site), Pilostyles thurberi (2 sites)	Potential adverse impacts on: Sensitive species (2) - 51,000 acres Significant species (2) - 25,000 acres	640 acres of very high and 4,480 acres of high sensitivity/ significance. Buried site potential over 7,680 acres. At a minimum 245 prehistoric and 25 historic sites are predicted.	Very significant cumulative impacts - 45 miles. 2 new lines assumed.	Potential for reduction in opportunities and experiences for interpretation/ education on 6,400 acres. Potential for adverse impacts to semi-primitive opportunities and experiences (MUC-L) along 44 miles of corridor in the balanced alt., and 10 miles of corridor in the use alt.
Use Alternative contains all the above plus the following:					
		Corridor U			
Approx. 50% of area contain soils highly sensitive to surface disturbance. Increased wind and water erosion and compaction.	UPA's: Salt Creek Riparian Area. Amargosa (Funeral Mtns.) Riparian Area.	Potential adverse impacts on: Sensitive species (3) - 84,000 acres Significant species (1) - 3,200 acres	Deleterious effects likely to cultural resources on 15,360 acres of very high and 25,600 acres of high sensitivity area. Buried site potential on 96,640	Significant cumulative impacts - 35 miles. Very significant cumulative impacts - 14 miles. 2 new lines assumed.	Potential for adverse impacts to semi-primitive opportunities and experiences (MUC-L) along 16 miles of corridor in the use alt. Potential for reduction in

Table UC-1 (cont.)

Soil	Vegetation	Wildlife	Cultural	Visual Resources	Recreation
			acres of area. Corridor could impact 17.5 miles of significant historic roads and trails. No fewer than 675 prehistoric and 85 historic sites are predicted. Anticipated overall impacts are high.		opportunities and experiences for interpretation/ education on 35,000 acres. Potential for increase in opportunities and experiences for recreation dependent upon vehicle access.
		Corridor V			
Approx. 50% of area contain soils highly sensitive to surface disturbance. Increased wind and water erosion and compaction. Approx. 96,000 acres of arable lands.	UPA's: Creosote Brush rings	Potential adverse impacts on: State-listed Rare species (1) - 166,500 acres Sensitive species (3) - 187,000 acres Significant species (1) - 2,300 acres	Potential impacts to: 12,160 acres of very high and 2,560 acres of high sensitivity/ significance. 78,080 acres of area with high to very high likelihood of buried sites, including 5 known Early Human sites. 6 miles of historic roads and trails. At least 1,100 prehistoric and 150 historic predicted sites.		Potential for reduction in opportunities and experiences for interpretation/ education on 12,000 acres and floral display sightseeing on 9,000 acres. Potential for increase in opportunities and experiences for recreation dependent upon vehicle access.
		Corridor W			
Low impact to soil because of existing facilities such as access roads and tower sites.	R, T, and E plants: Astragalus cimae var. cimae UPA's: Giant Yucca Schidigera Rings Shadow Valley Johnson Tree	Potential adverse impacts on: Sensitive species (4) - 172,000 acres Significant species (3) - 99,000 acres	Serious disturbance could occur to 3,200 acres of very high and 11,520 acres of high cultural resource		Potential for reduction in opportunities and experiences for interpretation/ education on 7,000

Table UC-1 (cont.)

Soil	Vegetation	Wildlife	Cultural	Visual Resources	Recreation
	Creosote Bush Rings	Unique habitats (5) - 47,500 acres	sensitivity/ significance. Buried and perhaps Early Human sites are likely to be disturbed by subsurface activities within 77,440 acres. No fewer than 11 Early Human sites are predicted. 4.5 miles of significant historic roads and trails crosscut the corridor. 1,400 prehistoric and 200 historic predicted sites could be endangered. Anticipated overall impacts are high.		acres. Potential for adverse impacts to semi-primitive recreation opportunities and experiences (MUC-L) areas along 30 miles of corridor in the use alt.
		Corridor X			
Disruption of soil in trenches, increased compaction, wind erosion and water erosion.	UPA's: Kelso Dunes Sacramento Mtn. Teddy Bear Cholla E. Ord Mts. Jojoba	Potential adverse impacts on: Sensitive species (3) - 92,000 acres Significant species (5) - 61,500 acres Unique habitats (1) - 44,800 acres	14,080 acres of very high and 35,200 acres of high cultural resource sensitivity/ significance and 100,480 acres of area with high to very high potential for buried sites could be seriously disturbed. 13 Early Human sites are known and at least 1,800 prehistoric and 300 historic sites are probably present.	Significant cumulative impacts - 24 miles. Very significant impacts - 13 miles. 2 new lines assumed.	Potential for reduction in opportunities and experiences for interpretation/ education on 16,000 acres and floral display sightseeing on 26,000 acres. Potential adverse impacts to semi-primitive opportunities and experiences (MUC-L) along 11 miles of corridor in the use alt.

Table UC-1 (cont.)

Soil	Vegetation	Wildlife	Cultural	Visual Resources	Recreation
Corridor Y					
Low impact to soil because of existing facilities such as access roads and tower sites.	No RTE, UPA	Potential adverse impacts on: Sensitive species (1) - 17,900 acres Significant species (2) - 13,400 acres	6,400 acres of very high and 7,040 acres of high cultural resource sensitivity/significance may potentially suffer adverse impacts. Further disturbance likely to 24.5 miles of significant historic roads and trails. No fewer than 500 prehistoric and 75 historic sites are predicted to occur.	Significant cumulative impacts - 40 miles. Very significant cumulative impacts - 6 miles. 2 new lines assumed.	Potential for reduction in opportunities and experiences for interpretation/education on 9,000 acres.
Corridor Z					
Low impact to soil because of existing facilities such as access roads and tower sites.	R, T, and E plants: Ammobroma sonorae (1 site) Pilostyles thurberi (1 site) Erigonum deserticola	Potential adverse impacts on: Federally-listed Endangered (2) -33,250 State-listed Rare species (1) - 2,500 acres Sensitive species (3) - 110,000 acres Significant species (3) - 48,000 acres Unique habitat (1) - 4,500 acres	Potential adverse impacts to: 10,880 acres of high cultural resource significance/sensitivity. Martinez Historical District and 20% of the Fages Trail National Register Districts. 55,040 acres of area with high to very high potential for buried sites. 10 known Early Human sites. At least 1,900 prehistoric and 250 historic sites could be adversely affected.	Significant cumulative impacts - 29 miles. Very significant cultural impacts - 18 miles. 1 new line assumed.	Potential for reduction in opportunities and experiences for interpretation/education on 13,000 acres.

TABLE KGRA-1

KNOWN GEOTHERMAL RESOURCE AREAS PROTECTION ALTERNATIVE

Soil	Vegetation	Wildlife	Cultural	Visual Resources	Recreation
East Mesa					
Complete disruption of soil at plant site, increased compaction, wind erosion and water erosion. Also possible contamination by toxic substances. 12,800 acres of arable lands present.	Potential impact on Erigonum deserticola.	Potential adverse impacts on: -Sensitive (1) - 34,500 acres. -Significant (1) - 34,500 acres. -Unique habitat (1) - 125 acres.	Potential adverse impacts on: -1920 acres of very high sensitivity/ significance -at least 90 sites (80 prehistoric and 10 historic) are known or predicted -areas of sensitive Native American values.	No significant visual impact.	Potential for reduction in opportunities and experiences for hunting on 7000 acres.
Glamis					
Complete disruption of soil at plant site, increased compaction, wind erosion and water erosion. Possible contamination by toxic substances.	No significant impact.	Potential adverse impacts on: -Sensitive (2) - 27,000 acres. -Significant (1) - 15,000 acres. -Unique habitat (1) - 12,000 acres.	Severe potential impacts to: -2560 acres. Very high buried/Early Human site potential. -estimated 40 prehistoric and 5 historic sites at minimum. -sensitive ritual and religious areas.	Very significant cumulative impact over entire area.	Potential for reduction in opportunities and experiences for hunting on 5000 acres and vehicle free play on 12,000 acres.

TABLE KGRA-2

KNOWN GEOTHERMAL RESOURCE AREAS
BALANCED ALTERNATIVE

Soil	Vegetation	Wildlife	Cultural	Visual Resources	Recreation
East Mesa					
Same as Protection Alt.	Same as Protection Alt.	Same as Protection Alt.	Potential impact on religious concerns of Native American groups including: Kamia, Southern Dieguено, Maricopa. Potential impacts on: -19,200 acres very high sensitivity/ significance. -14,720 acres high/ very high buried site potential. -2 National Register properties. -400 cultural sites (355 prehistoric and 45 historic) predicted.	Same as Protection Alt.	Potential reduction in hunting opportunities and experiences on 23,000 acres.
Glamis					
Same as Protection Alt.	Same as Protection Alt.	Same as Protection Alt.	Potential impacts on: -48 pre-historic and 7 historic sites (estimated). -6400 acres of high buried site potential.	Same as Protection Alt.	Potential reduction in hunting opportunities and experiences on 5,100 acres.
Randsburg/Spangler Hills					
Complete disruption of soil at plant site, increased compaction, wind erosion and water erosion. Possible contamination by toxic substances. -6,400 acres of arable lands present.	No significant impact.	Habitat fragmentation or loss for Mojave Ground Squirrel, Desert Tortoise, Golden Eagle, Prairie Falcon. -Potential impacts on 8000 acres of Red Mtns/El Paso raptor breeding wildlife habitat management area.	Potential impacts on: -1280 acres very high and 5760 acres high sensitivity/ significance, -8320 acres high/ very high buried site potential.	Significant impacts on 50% of area. Very significant impacts on 50% of area.	Potential reduction in hunting opportunities and experiences on 7,400 acres.

Table KGRA -2 (cont.)

Soil	Vegetation	Wildlife	Cultural	Visual Resources	Recreation
		-State-listed Rare species (1) - 9600 acres. -Sensitive species (2) - 17,500 acres. -Significant species (1) - 7400 acres. -Unique Habitat (1) - 8000 acres.	-2 National Resigter properties. -6 linear miles of significant historic roads and trails. -130 pre-historic and 30 historic sites estimated.		
		Ford Dry Lake			
Complete disruption of soil at plant site, increased compaction, wind erosion. Possible contamination by toxic substances. -2560 acres of arable land present.		Potential impact on: -1600 acres of the Ford Dry Lake Wildlife Habitat Management Area. -Sensitive species (1) - 3700 acres -Unique Habitats (1) - 1600 acres	Potential impacts on: -1920 acres high sensitivity/significance. -3840 acres high/very high buried site potential. -2 linear miles of significant historic roads and trails. -5 historic and 35 pre-historic sites (estimated). -Trails, collection areas and camps of traditional Native American use.	Significant impact on: -30% of area.	No significant impacts.
		Coso			
Approximately 70% of area contains soils highly sensitive to surface disturbances. Complete disruption of soils at plant site, increased compaction, wind erosion and water erosion. Possible contamination by toxic substances.		Potential adverse impacts on: -State-listed Rare species (1) - 34,500 acres. -Habitat loss and fragmentation. -Sensitive (1) - 14,000 acres. -Significant (1) - 17,000 acres. -Unique Habitat (1) - 4800 acres.	Potential impacts on: -1280 acres of very high significance/sensitivity. -5120 acres of high sensitivity/significance. -21,120 acres of high/very high buried site potential. -1 National Register property.	Significant impacts on: -15% of area. -Very significant impacts on 10% of area.	No significant impact.

Table KGRA–2 (cont..)

Soil	Vegetation	Wildlife	Cultural	Visual Resources	Recreation
			-7 linear miles of historic roads and trails. -380 prehistoric and 60 historic sites (estimated). -A potential understanding of the interrelationships among sites, cultural significance and environment could be lost including some of the oldest known sites in North America. -Extremely sensitive Native American values associated with ritual, religion and secular life.		

TABLE KGRA-3

KNOWN GEOTHERMAL RESOURCE AREAS
USE ALTERNATIVE

Soil	Vegetation	Wildlife	Cultural	Visual Resources	Recreation
East Mesa					
Same as Protection	Same as Protection	Same as Protection	Same as Balanced	No significant impact.	Potential reduction in hunting opportunities and experiences on 2300 acres.
Glamis					
Same as Protection	Same as Protection	Same as Protection	Potential impacts on: -3200 acres very high sensitivity/significance cultural and Native American values. -8960 acres high/very high buried site potential. -3200 acres of one National Register property. -56 prehistoric and 9 historic sites estimated.	-Significant impact on 20% of area. -Very significant impact on 70% of areas.	Potential reduction in hunting opportunities and experiences on 5100 acres.
Dunes					
Same as Protection	Same as Protection	Same as Protection	Potential impacts on: -640 acres of very high sensitivity/significance. -2560 acres high sensitivity/significance. -15 prehistoric sites estimated.	-Significant impact on 70% of area. -Very significant impact on 15% of area.	Potential reduction in hunting opportunities and experiences on 3800 acres (upland game).
Randsburg/Spangler Hills					
Approximately 50% of this area contains soils highly sensitive to surface disturbance. Complete disruption of soil at plant site,	Same as Protection	Potential impacts to: -Habitat fragmentation and loss: Desert Tortoise, Golden Eagle, Prairie Falcon, Mojave Ground Squirrel;	Potential impacts on: -7040 acres very high sensitivity/significance for Native and cultural resource values.	-Significant impact on 75% of area. -Very significant impact on 25% of area.	Potential reduction in hunting opportunities and experiences on 7400 acres.

Table KGRA-3 (cont.)

Soil	Vegetation	Wildlife	Cultural	Visual Resources	Recreation
increased compaction, wind erosion and water erosion. Possible contamination by toxic substances.		Potential impacts on: -16,000 acres of the Red Mountain/El Paso raptor breeding wildlife habitat management area. -5760 acres of proposed Fremont Stoddard Valley Desert Tortoise Crucial Habitat Area. -State-listed Rare species (1) - 18,000 acres. -Sensitive species (2) - 15,000 acres. -Significant species (1) - 14,000 acres -Unique Habitat (1) - 16,000 acres.	-5760 acres high sensitivity/significance. -12,160 acres very high buried site potential. -4 National Register properties. -6 linear miles of significant historic roads and trails. -205 prehistoric and 45 historic sites predicted.		
		Ford Dry Lake			
Same as Protection	Same as Protection	Same as Protection	Same as Balanced	Same as Balanced	No significant impact.
		Coso			
Complete disruption of soil at plant site, increased compaction, wind erosion and water erosion. Possible contamination by toxic substances.	Same as Protection	Habitat loss and fragmentation: Total Mojave Ground Squirrel, -5760 acres critical Mojave Ground Squirrel habitat. -31,680 acres Golden Eagle foraging habitat. -59520 acres Desert Bighorn transient range. -82,560 acres Mule Deer habitat. -640 acres Pallid Bat habitat. -2560 acres Townsend's Long-eared Bat habitat. -5440 acres of proposed East Sierra Canyons Representative habitat. -State listed Rare species (1) - 78,500 acres. -Sensitive species (2) - 91,000 acres.	Potential impact to: -3200 acres very high sensitivity/significance. -5760 acres high sensitivity/significance. -42,880 acres high very high buried site potential. -2 National Register properties. -21 linear miles of historic roads and trails. -435 prehistoric and 65 historic sites (estimated). -High potential for impacts on religious and ritual integrity of Native Americans.	-Significant impact to 3% of area. -Very significant impact to 2% of area.	No significant impact.

Table KGRA-3 (cont.)

Soil	Vegetation	Wildlife	Cultural	Visual Resources	Recreation
		-Significant species (3) - 85,500 acres. -Unique Habitat (1) - 5400 acres.			
		Saline Valley			
Approximately 25% of area contains soils highly sensitive to surface disturbance. Complete disruption of soil at plant site, increase compaction, wind erosion and water erosion. Possible contamination by toxic substances.	Same as Protection	Potential impact to: -320 acres Desert Bighorn habitat. -640 acres Mule Deer habitat. -3072 acres Prairie Falcon foraging area. -128 acres Prairie Falcon concentration area. -10% reduction of foraging area of the three Prairie Falcon eyries in the vicinity. -Sensitive species (1) - 320 acres. -Significant species (2) - 3750 acres. -Unique Habitat (1) - 130 acres.	Potential impact to: -1920 acres very high sensitivity/ significance. -3200 acres high/ very high buried site potential. -40 prehistoric and 5 historic sites (estimated) including a major hunting blind complex around one set of springs which may be eligible for the National Register. -Native American polygon 33, considered sacred by the Chemehuevi and Panamint Shoshone. -Springs ritually important to Panamint Shoshone, Owens Valley Shoshone and Owens Valley Paiute.	-Significant impacts on 75% of area. -Very significant impact on 25% of area.	Potential for reduction in opportunities and experiences for hunting on 3200 acres.

Table WS-1

WIND SITES ELEMENT
Protection Alternative

Soil	Vegetation	Wildlife	Cultural	Visual Resources	Recreation
		Site 4			
Increased compaction around site & increased water & wind erosion from access roads.	No significant impacts.	Potential impacts on: -128 acres of Fremont-Stoddard Desert Tortoise Wildlife Habitat Management Area. -4,672 acres of Mojave Ground Squirrel habitat of which 1,600 acres are critical. Rare species: (1) - 4,700 acres. Unique Habitat: (1) - 130 acres.	Overall impacts would be moderate. Potential impacts on: -1,280 acres of high buried site potential. -4 prehistoric and 1 historic sites, minimally (estimated).	Significant impact on 50% of area.	No significant impact.
		Site 10			
Increased compaction around site & increased water & wind erosion from access roads.	No significant impacts.	Potential impacts to: -3,520 acres of Newberry Granite Mountains raptor breeding area. -3,200 acres of range of three Prairie Falcon and four Golden Eagle Eyries. Sensitive species: (1) - 3,200 acres. Significant species: (1) - 3,200 acres. Unique Habitat: (1) - 3,500 acres.	Potential impacts on: -10 Prehistoric sites, mostly rockshelters. -Stoddard Well Road	Significant impact on 60% of the area.	Potential for reduction in opportunities & experiences for hunting on 7,000 acres.
		Site 11			
Increased compaction around site & increased water & wind erosion from access roads.	No significant impacts.	Potential impacts on: -1,280 acres of Prairie Falcon and Golden Eagle range. -1,600 acres of Newberry/Granite Mountains Raptor Breeding Area. Sensitive species: (1) - 1,300 acres. Significant species: (1) - 1,300 acres. Unique Habitat: (1) - 1,600 acres.	Potential impacts on: -Two historic & six prehistoric sites (estimated). Overall impacts would be negligible	Significant impacts on 80% of area - very significant impact on 20% of area.	Potential reduction in hunting opportunities & experiences on 3,800 acres.

Table WS-2

WIND SITES ELEMENT
Balanced Alternative

Soil	**Vegetation**	**Wildlife**	**Cultural**	**Visual Resources**	**Recreation**
		Site 1			
Increased compaction around site and increased water and wind erosion from access roads.	No significant impact.	Potential impacts to: -7,872 acres transient Bighorn Sheep habitat. -7,872 acres Mule Deer habitat. -15,680 acres non-critical Mojave Ground Squirrel habitat. -41% to 82% of foraging habitat for one pair of Golden Eagles. Rare species: (1) - 15,500 acres. Sensitive species: (2) - 18,000 acres. Significant species: (1) - 7,800 acres.	Potential impacts to: -640 acres very high sensitivity/ significance. -185 cultural sites (estimated), including 20 historical sites. -7,040 acres of high/very high buried site potential. -potential impact on sensitive resources of importance to Native Americans. -3 linear miles of historic wagon road.	15% of area significant visual impact. 60% very significant visual impact.	No significant impact.
		Site 4			
Increased compaction around site and increased water and wind erosion from access roads.		Potential impacts to: -Forage habitat for 1 pair Prairie Falcon. -Low density Desert Tortoise populations, which cover 54% of area. -2,240 acres of Fremont-Stoddard Desert Tortoise WHMA. -4,672 acres of Mojave Ground Squirrel habitat, of which 2,240 acres are critical. State listed rare species: (1) - 5,100 acres. Sensitive species: (1) - 2,600 acres. Significant species: (1) - 1,300 acres. Unique Habitat: (1) - 2,200 acres.	Potential impacts to: -1,920 acres of high buried site potential. -640 acres of high sensitivity/ significance. -at least 15 cultural sites (estimated). -1,920 acres of highly sensitive Native American value concentrations.	100% of area very significant visual impact.	No significant impact.

Table WS-2 (cont.)

Soil	Vegetation	Wildlife	Cultural	Visual Resources	Recreation
		Site 7			
Increased compaction around site and increased water and wind erosion from access roads.		Potential impacts to: -1 Golden Eagle Eyrie. -Medium density Tortoise populations, which cover 38% of area. -5% of area is part of Fremont-Stoddard Desert Tortoise WHMA. Sensitive species: (2) - 8,500 acres. Significant species: (1) - 640 acres. Unique Habitat: (2) - 500 acres.	Potential impacts to: -23 prehistoric & 4 historic sites (estimated).	60% of area significant visual impact. 40% of area very significant visual impact.	Potential reduction in hunting opportunities & experiences on 6,400 acres.
		Site 10			
Increased compaction around site and increased water and wind erosion from access roads.		Same as Protection	Same as Protection	60% of area significant visual impact.	Potential reduction in hunting opportunities & experiences on 7,000 acres.
		Site 11			
Increased compaction around site and increased water and wind erosion from access roads.		Potential impacts on: -1,280 acres of Prairie Falcon and Golden Eagle range. -1,600 acres of Newberry/Granite Mountains raptor breeding area. Potential interference with raptor mating, territorial and courtship behavior. Sensitive species: (1) - 1,300 acres. Significant species: (1) - 1,300 acres. Unique Habitats: (1) - 1,600 acres.	Overall impacts are expected to be limited to the potential 6 prehistoric and 2 historic sites.	100% of area significant visual impact.	Potential reduction in hunting opportunities and experiences on 3,800 acres.

Table WS-2 (cont.)

Soil	Vegetation	Wildlife	Cultural	Visual Resources	Recreation
		Site 12			
Increased compaction around site and increased water and wind erosion from access roads.		Potential impacts to: -2,240 acres of Prairie Falcon and Golden Eagle foraging and concentration area. -2,240 acres of the Granite Newberry raptor breeding area. Sensitive species: (1) - 2,200 acres. Significant species: (1) - 2,200 acres. Unique Habitat: (1) - 2,200 acres.	Overall impacts are expected to be low as only an estimated five sites are predicted in this region.	100% of area significant visual impact.	Potential reduction in hunting opportunities and experiences on 2,600 acres.
		Site 14			
Increased compaction around site and increased water and wind erosion from access roads.		Potential impacts on: -Potential future reintroduction of Bighorn on 11,520 acres of the former Rodman Mountain Bighorn Sheep range - 1 pair Prairie Falcons - 1 pair Golden Eagles. Sensitive species: (1) - 320 acres. Significant species: (1) - 320 acres. Unique Habitat: (1) - 1,300 acres.	Potential impacts on: -640 acres very high cultural sensitivity/significance. -Rodman Mountains (Nominated as a National Register District) -At least 9 prehistoric sites predicted for the area.	100% of area significant visual impact.	Potential reduction in hunting opportunities and experiences on 1,300 acres.
		Site 17			
Increased compaction around site and increased water and wind erosion from access roads.		Potential impacts on: -640 acres of Mule Deer range. -640 acres of Golden Eagle foraging area. Sensitive species: (1) - 640 acres. Significant species: (1) - 640 acres.	Potential impacts on: -640 acres of high sensitivity/significance. -2 prehistoric and 6 historic sites. -1 linear mile of significant historic road: the Cerro Gordo Road	50% significant visual impact. 50% very significant visual impact.	Potential reduction in hunting opportunities and experiences on 640 acres.

Table WS-3

WIND SITES ELEMENT
Use Alternative

Soil	Vegetation	Wildlife	Cultural	Visual Resources	Recreation
Site 1					
Increased compaction around site and increased water and wind erosion from access roads.		Same as Balanced	Same as Balanced	Same as Balanced	Same as Balanced
Site 2					
Increased compaction around site and increased water and wind erosion from access roads.		Potential impacts on: -Foraging habitat for four pairs of Prairie Falcons and two pairs of Golden Eagles. -448 acres of Mojave Ground Squirrel habitat. -9,216 acres of Mule Deer habitat. -wind site overall, which is a unique ecotonal area. State listed rare species: (1) - 450 acres. Sensitive: (1) - 10,500 acres. Significant species: (2) - 20,000 acres. Unique Habitat: (1) - 10,250 acres.	Potential impacts on: -5,120 acres of high sensitivity/significance (mostly on northern boundary of area). -3 linear miles of the Owens Valley Road. -40 prehistoric and 10 historic sites (estimated).	90% significant visual impact. 5% very significant visual impact.	No significant impact.
Site 3					
Increased compaction around site and increased water and wind erosion from access roads.		No significant impact.	Potential impacts on: -early human sites (high potential for their existence). -five prehistoric and five historic sites (estimated).	No significant impact.	Potential reduction in hunting opportunities and experience on 2,600 acres.

Table WS-3 (cont.)

Soil	Vegetation	Wildlife	Cultural	Visual Resources	Recreation
		Site 4			
Increased compaction around site and increased water and wind erosion from access roads.		Same as Balanced	Potential impacts to: -640 acres high cultural significance/ sensitivity. -1,920 acres high buried site potential. -at least 15 cultural sites anticipated.	100% very significant visual impact.	No significant impact.
		Site 5			
Increased compaction around site and increased water and wind erosion from access roads.		Potential impacts on: -re-introduction of bighorn sheep (entire site was former sheep range). -Foraging range for one pair of Prairie Falcons and one pair of Golden Eagles including one eyrie. -Low-density desert tortoise habitat. Sensitive species: (1) - 3,200 acres. Significant species: (1) - 3,200 acres.	Potential impacts on: -2,560 acres very high cultural significance/ sensitivity. -2,560 acres high buried site potential. -15 cultural sites (estimated). Overall impacts would be high to severe.	70% significant visual impact. 30% very significant visual impact.	No significant impact.
		Site 6			
Increased compaction around site and increased water and wind erosion from access roads.		Potential impacts to: -Potential for bighorn sheep re-introduction. -Prairie Falcon and Golden Eagle foraging range. -Low density desert tortoise habitat. Sensitive species: (2) - 2,500 acres. Significant species: (1) - 200 acres.	Potential impacts on: -10 cultural sites (estimated). -1,920 acres very high significance/ sensitivity. -1,280 acres very high buried site potential. -historical remains related to Calico	60% significant visual impact. 40% very significant visual impact.	No significant impact.

Table WS-3 (cont.)

Soil	Vegetation	Wildlife	Cultural	Visual Resources	Recreation
			mining district. Overall impacts would be moderate.		
		Site 7			
Increased compaction around site and increased water and wind erosion from access roads.		Same as Balanced	Same as Balanced	Same as Balanced	Same as Balanced
		Site 8			
Increased compaction around site and increased water and wind erosion from access roads.		Potential impacts on: -Foraging area for four pairs of Golden Eagles and one pair of Prairie Falcons. Sensitive species: (1) - 13,000 acres. Significant species: (1) - 13,000 acres. Unique Habitat: (2) - 15,500 acres.	Potential impacts on: -3,840 acres of highly sensitive/ significant cultural resources. -at least 25 prehistoric and 5 historic predicted sites. -11,520 acres of very high buried site potential.	95% very significant visual impact.	Potential reduction in hunting opportunities and experiences on 13,000 acres.
		Site 9			
Increased compaction around site and increased water and wind erosion from access roads.		Construction would render recolonization of Bighorn infeasible. Potential impacts on four pairs of Prairie Falcons and two pairs of Golden Eagles, as site lies within the Newburg Granite raptor core area. Impacts may be severe, including reduced fecundity and/or longevity. Sensitive species: (1) - 1,300 acres. Significant species: (1) - 1,300 acres.	Potential impacts on: -A minimum of 10, and possibly 20 prehistoric sites. -640 acres very high buried site potential. Since the entire site falls within an area of high cultural sensitivity, impacts could be severe.	100% very significant visual impact.	Potential reduction in hunting opportunities and experiences on 13,000 acres.

Table WS-3 (cont.)

Soil	Vegetation	Wildlife	Cultural	Visual Resources	Recreation
		Unique Habitat: (1) - 1,300 acres.			
		Site 10			
Increased compaction around site and increased water and wind erosion from access roads.		Same as Protection	Same as Protection	Same as Protection	Same as Protection
		Site 11			
Increased compaction around site and increased water and wind erosion from access roads.		Same as Protection	Same as Protection	Same as Protection	Same as Protection
		Site 12			
Increased compaction around site and increased water and wind erosion from access roads.		Same as Balanced	Potential impacts on: -at least five cultural sites (estimated).	Same as Balanced	Same as Balanced
		Site 13			
Increased compaction around site and increased water and wind erosion from access roads.		Potential impacts on: -640 acres of Mule Deer concentration area. Significant species: (1) - 640 acres.	Overall impacts could be serious on the predicted eight prehistoric sites in this area. Entire area (within CDCA) has very high sensitivity/significance.	100% significant visual impact.	Potential reduction in hunting opportunities and experiences on 640 acres.
		Site 15			
Increased compaction around site and increased water and wind erosion from access roads.		Potential impacts on: Bighorn sheep concentration area, which covers entire site. -Mule Deer range, which	Potential impacts on: -60 prehistoric and 10 historic sites.	100% very significant visual impact.	Potential reduction in hunting and rock collecting opportunities and experiences on

Table WS-3 (cont.)

Soil	Vegetation	Wildlife	Cultural	Visual Resources	Recreation
		encompasses site. -2 pairs Golden Eagles and 1 pair Prairie Falcons. Sensitive species: (1) - 3,000 acres. Significant species: (3) - 4,800 acres. Unique Habitat: (1) - 1,600 acres. -Gray Vireo habitat Overall impacts on the New York Mountain Wildlife habitats may be significant.	Overall impacts would be moderate.		1,900 acres.
		Site 16			
Increased compaction around site and increased water and wind erosion from access roads.		Potential impacts on: -8,320 acres of foraging range of one Golden Eagle Eyrie. -7,872 acres of Mule Deer range. -1,280 acres of Rock Squirrel habitat. -64 acres of Gila Monster range. -Bighorn Sheep seasonal range. -Sensitive species: (2) - 16,500 acres. -Significant species: (2)- 9000 acres.	Potential impacts on: -130 prehistoric and 20 historic sites. -6,400 acres of high buried site potential. -11,520 acres of high cultural resource sensitivity/significance.	100% very significant visual impact.	Potential reduction in hunting opportunities and experiences on 7,700 acres. Potential reduction in rock collecting opportunities and experiences on 1,900 acres.
		Site 17			
			Potential impacts on: -640 acres high cultural sensitivity/significance. -640 acres of significant road as well as the Cerro Gordo Road.	Same as Balanced	Same as Balanced

Table MW-1

MICROWAVE ELEMENT
PROTECTION ALTERNATIVE

Soil	Vegetation	Wildlife	Cultural	Visual Resources	Recreation
		Site 1			
Soils highly sensitive to surface disturbance. Increased compaction around microwave site and increased water erosion from access roads.		Potential impacts on: 1,408 acres of Desert Bighorn transient range. -Mule Deer concentration area. -Golden Eagle foraging area. Sensitive species: (4,700 acres) Significant species: (5,000 acres)	Potential impacts on: -Cerro Gordo Historic mining remains. -Area of high sensitivity/significance.	Significant impact.	No significant impact.
		Site 2			
Soils highly sensitive to surface disturbance. Increased compaction around microwave site and increased water erosion from access roads.		Potential impacts on: -Prairie Falcon forage range. Significant species: (130 acres)	Potential impacts on: -Coso Mines historical/archaeological complex. -Area of high sensitivity/significance.	No significant impact.	No significant impact.
		Site 3			
			Moderately significant impact	Very significant impact.	No significant impact.
		Site 4			
Soils highly sensitive to surface disturbance. Increased compaction around microwave site and increased water erosion from access roads.		Potential impacts on: -Mule Deer Concentration Area. -Desert Bighorn seasonal range. Sensitive species: 5,750 acres. Significant species: 5,750 acres.	No significant impact.	No significant impact.	No significant impact.

Table MW-1 (cont.)

Soil	Vegetation	Wildlife	Cultural	Visual Resources	Recreation
		Site 5			
Increased compaction around microwave site and increased wind and water erosion from access roads.		Potential Impacts on: -Algodones Dunes ACEC. -Fringe-toed lizard habitat. -Flat-tailed horned lizard habitat. Sensitive species: (1) - 3,600 acres. Significant species: (1) - 1,150 acres. Unique Habitat: (1) - 750 acres.	No significant impacts expected.	Significant impact.	No significant impact.

Table MW-2

MICROWAVE ELEMENT
Balanced/Use Alternative

Soil	Vegetation	Wildlife	Cultural	Visual Resources	Recreation
Balanced contains all of the above					
Use contains all of the above plus the following.					
Site 6					
Same as 1		Potential impacts on: -Desert Bighorn permanent range. Sensitive species: (1) - 1,000 acres.	No significant impacts expected.	Significant impact.	No significant impact.

Table PE - 10

SUMMARY OF MINERALS ELEMENT IMPACTS

Resource	No Action Alternative	Protection Alternative	Balanced Alternative	Use Alternative
Air	◑	○	○	◑
Water	◑	◑	◑	◑
Soil	●	◑	◑	●
Vegetation	◑	◑	◑	●
Wildlife	●	○	◑	●
Cultural	●	◑	◑	●
Native American	●	◑	◑	●
Wilderness	◑	○	○	○
Visual	◑	⦶	○	◑
General Recreation	○	○	○	○
Motorized Vehicle	⦶	○	○	○
Grazing	○	○	○	○
Burros	○	○	○	○
Social Factors	○	●	◑	○
Economic Factors	○	◑	○	⦶

• LEGEND •

○ No significant impact

⦶ Positive impact

⊕ Highly positive impact

◑ Negative Impact

● Highly negative impact

Note: The No Action Alternative assumes present BLM management, actual livestock use, and that wild horse and burro numbers will remain unchanged over the next 20 years (see page 31 of the plan for a more complete explanation).

The Protection, Balanced, and Use Alternative columns indicate impacts anticipated in the next 20 years when an alternative is compared against existing 1980 conditions.

IMPACTS OF THE MINERAL EXPLORATION AND DEVELOPMENT ELEMENT

The mineral exploration and development element poses the risk of severe environmental impact. The extent of impact, however, cannot be conclusively determined from any of the plan alternatives since mineral exploration and development is provided for, to some degree, in all multiple use classes. Within the multiple use class guidelines, any land not otherwise withdrawn from mineral entry is available for mineral exploration and development and is exposed to potential impact. Impacts to the natural and cultural resources described below represent the maximum potential risk of impact of this element. Based on past BLM records, less than one percent of the public lands would be significantly impacted, but impacts on any given site may be severe.

* * *

▲ On Air Quality. Mineral exploration and development can cause air quality deterioration primarily in the form of particulates or dust. Without proper abatement techniques, ore crushing, grading, and other processes can raise significant quantities of dust. Once extracted, the various refining and smeltering processes can emit significant amounts of gaseous pollutants, particularly sulfur dioxide. The degree of air quality impact depends upon the type and amount of ore processed, the type of production and pollution control equipment, the regional meteorological characteristics, and proximity of air pollution sensitive receptors.

The potential for air quality impacts is greatest in the Use and No Action Alternatives because of the more extensive mineral exploration and development activities allowed. For these alternatives some negative impact on air quality can be expected. With the much lower degree of exploration and development under the Protection and Balanced Alternatives no significant air quality impact is expected.

▲ On Water Resources. Surface disturbance resulting from mineral exploration and development may alter water runoff characteristics and accelerate soil erosion. Increased runoff and sedimentation, however, will rarely be delivered to surface water supplies in the desert. It is not expected, therefore, that such circumstances would impact beneficial uses of water to a great extent.

The most serious water resource impact associated with mining is pollution of surface and ground water. Increased concentrations of dissolved solids and specific chemical constituents may result from mining operations. Mining operations can also alter groundwater distribution patterns, and aquifers containing high quality water may be contaminated through contact with an aquifer of poor quality water. The mining wastes deposited in evaporation ponds threaten water quality as dissolved substances are leached into groundwater supplies. Mining wastes (spoil piles and evaporation ponds) are subject to natural runoff. The resultant mixture may enter surface or groundwater supplies. The increased concentrations of chemicals in water supplies caused by mining activities may impact several beneficial uses of water.

Mining operators are required to comply with water quality regulations of the State Water Quality Control Boards. Compliance with these regulations will significantly reduce the described impacts. Implementation of water quality regulations cannot be expected, however, to eliminate all negative impacts.

The degree of negative impact to beneficial uses of water cannot be reliably evaluated.

▲ On Soils. Impacts on soils from recovery of minerals would include disruption or complete removal of soil horizons, increased compaction, increased wind and water erosion, and contamination by toxic materials. These impacts would occur in all alternatives, but with greater potential for disturbing larger areas in the following order: Protection, Balanced, No Action, and Use. The total areas which would be disturbed cannot be predicted. The No Action and Use Alternatives were considered to have highly negative impacts because of the much higher percentage of area in Class M and Class I which could be disturbed in mining.

▲ On Vegetation. The major impacts to Rare, Threatened and Endangered plant species from mineral development would primarily be due to development of locatable minerals in the northern half on the CDCA, while saleables would have a greater impact in the southern half.

In the No Action Alternative mineral leasing and material sales would continue on a case-by-case basis; therefore, analysis on the number and extent of impacts on vegetation is impossible. However, these impacts are generally highly negative and of high intensity.

In the Protection Alternative six Unique Plant Assemblages (UPAs) may be impacted. Sixteen Rare, Threatened, or Endangered plant populations in 7 mineral potential areas may also be impacted. Approximately 1 million acres would be available for mineral exploration and development under this alternative; this would reduce potential forage accordingly.

Potentially 13 UPAs could be impacted under the Balanced Alternative. Twenty-nine Rare, Threatened, or Endangered species could be impacted in 11 mineral potential areas.

Under the Use Alternative, 32 UPAs could be impacted from mineral development. The extent of these potential impacts would range from 10 to 100 percent of the area of each UPA. Ninety-six Rare, Threatened, or Endangered species could also be impacted.

▲ On Wildlife. Exploration, development, and extraction have cumulatively increasing adverse impacts on wildlife populations and habitats. Loss of wildlife habitat may occur from exploration and development of oil and gas deposits (which could occur over large portions of desert valley systems), extraction of minerals (such as tungsten, gold and lead concentrated in desert mountains), and use of gravel, stone, or clay deposits present in alluvial fans and washes throughout the CDCA. Habitat degradation would result from construction of roads, pipelines, open pits, and shafts; grading and trenching; formation of dumps and tailing ponds; and leaching of toxic chemicals used during the extraction process. Conversely, underground mining activities may create habitat for bats, shelter for carnivores (such as Bobcats and Ringtails), or denning areas for snakes, although this would only take place in areas which are not extensively mined and have been abandoned for several years.

The extent of wildlife habitat loss resulting from mineral exploration and development would vary with plan alternative and multiple use class designation. Class restrictions on extraction, development, and exploration, and guidelines on reclamation determine the extent of potential habitat degradation more than mineral resource boundary lines do. Potential impacts would be constrained most in lands designated as Class C or L. An individual environmental statement would be required prior to approval of mineral leasing on Class L designated lands. In contrast, potential for habitat loss would be highest on Class M and Class I designated lands. Virtually all BLM-administered lands have potential for exploration and development of one or more mineral resources. The specific impacts of development and extraction of these resources on individual species and habitats would vary with each area, with the mineral resource involved and its market potential, accessibility, size and with the recovery technique employed.

For example, 37 percent of the range of the Desert Tortoise, 24 percent of the Mohave Ground Squirrel range, and 87 percent of the Andrews Dune Scarab Beetle range are on Class M and I designated lands within potential oil and gas leasing areas under the No Action Alternative. Other species which face similar declines in range size and habitat condition include the Kingston Mountain Chipmunk, Desert Bighorn Sheep, Amargosa Vole, Prairie Falcon, and Golden Eagle.

Under the No Action Alternative, potential detrimental impacts to wildlife resources are highly negative. Habitat loss and degradation, as well as species decline in population size and range, could take place on 2.9 million acres of "locatables", 3.4 million acres of "leasables", and 0.3 million acres of "saleables".

Under the Protection Alternative, habitat losses and population declines caused by mining activities would be the lowest of any of the alternatives, but the impacts would still be slightly negative. Relative to the current situation, this alternative would be slightly positive. Wildlife resources on 0.4 million acres of "locatables," 0.5 million acres of "leasables," and 0.03 million acres of "saleables" would be subject to the impacts associated with mining activities.

Under the Balanced Alternative, deletorious impacts to wildlife resources would be greater than under the Protection Alternative. Relative to the current situation, this alternative would be negative to wildlife. Approximately 1.9 million acres of "locatables," 2.4 million acres of "leasables," and 0.2 million acres of "saleables" are subject to development in the multiple use classes M and I.

Under the Use Alternative, potential negative effects on wildlife populations and habitat are highly negative, with the largest total area subject to the impacts of exploration and development. Relative to the current situation this alternative would be highly negative to wildlife. Degradation of wildlife resources could occur on 3.7 million acres of "locatables," 4.1 million acres of "leasables," and 0.4 million acres of "saleables" situated on lands in multiple use classes M and I.

▲On Cultural and Native American Resources. The Minerals Exploration and Development Element poses one of the greatest potential threats to the integrity of Cultural/Native American resources and values of all allowable activities within the CDCA. The potential impacts of exploration and development could occur at many locations and will vary by plan alternative, directly reflecting the relative proportions of land under each multiple use class.

The only predictive index for anticipating the location and intensity of impacts are guidelines for exploration and development under the multiple use classes. Class M and Class I are generally compatible with these activities; severe deterioration and destruction of cultural resource sites and large areas of Native American value may result from exploration and development in these classes. Although Class C and L areas required the completion of an individual environmental statement prior to the approval of mineral exploration or development projects, protection is not necessarily ensured for cultural resources and values. Mineral exploration and development in these classes could have severe adverse effects where allowed, since they may contain a relatively greater concentration of historic, prehistoric, and Native American resources and values than range and comparable activities in classes M and I.

The level of impacts to cultural resources by mineral exploration and development activities would be highly dependent upon a number of factors. These factors include: requirements for increased access to the development site, type and extent of the exploration or development technique, degree and feasibility of pre-impact mitigation, location of the activity, type of cultural resource(s) which would be impacted, the level of planning and review, and the extent of secondary and indirect impacts.

The No Action Alternative poses an indefinite potential for adverse impacts since all mineral exploration and development, except where lands have been withdrawn from mineral entry, is regulated on a case-by-case basis pursuant to applicable laws and policies. Under the Protection Alternative only 3 percent of the identified cultural resource areas occur in classes M and I. Under the Balanced and Use Alternatives the comparable percentages are 42 and 76, respectively.

▲On Visual Resources. Relatively little mineral exploration and development is anticipated to visual impacts. This is based upon the following facts:

1) About 1 percent of the mineral potential is developed beyond the exploration stage;

2) Of activities that get beyond exploration, most of these are small-scale, shaft-type mining which creates relatively low visual contrasts;

3) At least 50 percent of developments would occur in locations which would not be visible from common viewing points; and

4) Developments which could create visual impacts would be most likely to occur in the No Action or Use Alternatives.

Visual impacts from mineral exploration and development would be insignificant in all alternatives. However, on a site-by-site basis, significant impacts could result from large-scale developments or from an accumulation of small-scale operations. Such impacts would be attributed to the development of roads and utilities, excavations and other alterations of landform, and erection of buildings and other facilities.

Environmental assessment procedures will help reduce potential impacts. Design restrictions could also help, including such measures as the aesthetically appropriate shaping and placement of tailings sites, coloration of facilities, and location of roads and utilities.

▲On Wilderness. While the No Action Alternative would result in the continued degradation of wilderness values and opportunities, there would be no significant impact from any of the other alternatives. Wilderness values would be fully protected within designated wilderness areas.

▲On General Recreation. Desertwide impacts to recreation would be insignificant across all alternatives. However, significant impacts to recreation could occur on a site-by-site basis.

▲On Vehicle-oriented Recreation. Under all alternatives, opportunities for vehicle touring, trail biking, and exploring would be enhanced by the proliferation of roads built in support of mineral exploration and development. Potential impacts are not significant on a desertwide basis. However, there are site-specific exceptions, such as the increased number of mine shafts which would present a considerable hazard to vehicle users and closure of mined areas to the general public.

▲ On Socioeconomic Values. None of the four alternatives would constrain the existing major mineral producers. These producers have reserves secured by private land and have been further protected by the Class I designation on the BLM-administered land surrounding their operations in all alternatives.

The values cited below are potential mineral reserves located on BLM-administered lands. These are "mine mouth" values and therefore include cost of mining; they do not represent values in the ground.

Table PE-11

MINERAL AVAILABILITY BY ALTERNATIVE

Alternative by Multiple-use Class	Dollar Value (billions)	%	Energy Fraction acres (millions)*	% of BLM Energy Fraction
No Action				
C - essentially no new development	0	0	0	0
L - extremely constrained development	17.4	23	1.7	33
M&I - developable	59.9	77	3.4	66
Protection				
C - essentially no new development	20.1	26	2.0	37
L - extremely constrained development	40.9	53	3.0	55
M&I - developable	16.2	21	0.5	9
Balanced				
C - essentially no new development	5.6	7	0.4	8
L - extremely constrained development	32.1	41	2.2	42
M&I - developable	39.8	51	2.6	49
Use				
C - essentially no new development	0.4	1	0.1	2
L - extremely constrained development	11.3	15	0.6	12
M&I - developable	63.6	84	4.3	85

*May be overestimated by up to 10% due to double counting.

The small miner life style would be nearly eliminated from the CDCA under the Protection Alternative. The Balanced Alternative would diminish the numbers of small miners but to a much lesser degree. The other alternatives would essentially not affect small miners.

Energy mineral development would be almost entirely eliminated under the Protection Alternative except for geothermal development in the Imperial Valley. Development of geothermal resources would be somewhat less constrained in the Balanced Alternative, but several geothermal areas would be inhibited by the absence of a transmission line corridor through Class L areas. This would also affect the private lands intermingled with BLM-administered lands in geothermal areas.

• L E G E N D •

○ No significant impact

⦶ Positive impact

⊕ Highly positive impact

◑ Negative Impact

● Highly negative impact

Note: The No Action Alternative assumes present BLM management, actual livestock use, and that wild horse and burro numbers will remain unchanged over the next 20 years (see page 31 of the plan for a more complete explanation).

The Protection, Balanced, and Use Alternative columns indicate impacts anticipated in the next 20 years when an alternative is compared against existing 1980 conditions.

Table PE - 12

SUMMARY OF DOMESTIC LIVESTOCK GRAZING ELEMENT IMPACTS

Resource	No Action Alternative	Protection Alternative	No Grazing Alternative	Balanced Alternative	Use Alternative
Air	○	○	○	○	○
Water	◑	⦶	○	⦶	⦶
Soil	◑	◑	○	◑	◑
Vegetation	◑	⦶	⦶	⦶	⦶
Wildlife	●	○	⊕	○	◑
Cultural	●	⦶	⊕	○	●
Native American	●	⦶	⊕	○	◑
Wilderness	○	○	○	○	○
Visual	○	○	○	○	○
General Recreation	○	○	○	○	○
Motorized Vehicle	○	○	○	○	○
Grazing	◑	◑	●	◑	◑
Burros	○	◑	⊕	◑	●
Socioeconomic	○	○	◑	○	○
	○	◑	●	◑	○

IMPACTS OF THE LIVESTOCK GRAZING ELEMENT

Impacts of the Grazing Element would result from the proposed forage allocation, kind of livestock, range improvements, and season and intensity of use. To supplement the overall comparison of the impacts of each plan alternative, a summary of the impacts expected in each grazing allotment is provided (see tables GR-1, GR-2, GR-3, GR-4, and GR-5 following narrative discussion).

* * *

● On Water Resources. Grazing impacts to vegetation and soil influence water runoff characteristics. In the desert, however, this influence is decreased because even undisturbed vegetation (usually less than 20 percent cover) provides only minimal watershed protection. The influence of soil compaction is significant in places where animals congregate, such as trails, holding areas, and watering areas. There is a potential for the accelerated runoff and soil erosion caused by grazing to impact beneficial uses of water in streams which serve as watering places for livestock.

Livestock wastes may enter water supplies directly or be washed into streams or storage structures. Increases in coliform bacteria and chemical constituents, such as nitrate, have been observed. Several beneficial uses of water could be affected.

Management of the riparian areas as ACECs will reduce the negative water quality impacts of grazing, and will protect beneficial uses of water.

The options for conflict resolution detailed in the Livestock Grazing Element and the management of ACECs would have a positive impact on maintaining beneficial uses of water supplies in all but the No Action Alternative. In the No Action Alternative the negative impacts associated with present grazing practices would continue.

●On Soils. Grazing causes severe soil compaction in limited areas, such as watering sites, holding areas, and intensively used trails. Compaction decreases greatly as the distance from these concentrated use areas increases, so the area of severe impact is typically very localized. Vegetative cover in the desert is generally very low and does not play a major role in controlling water erosion. Thus, even if significant reductions in existing cover did occur, it would typically not cause a large change in the rate of erosion. Also, cover in the desert may not be appreciably changed even by heavy grazing (species composition may be altered without causing a significant change in cover). It does not appear that grazing is generally connected with significant increases in water erosion in the desert. Disruption of surface vesicular crusts by grazing animals may cause increases in infiltration.

Wind erosion and dust production would most likely be increased to a greater extent by sheep grazing than by cattle. Movement of sheep may cause large amounts of dust due to the extent of the surface disturbed by flocks. The changes in soil due to grazing and the interaction with processes of detachment, transportation, and sedimentation over a large area, such as grazing allotments, are not fully understood. However, soil impacts will not be great. All alternatives except the No Grazing Subalternative have the same general impacts described above, because of the minor differences in total AUMs between alternatives.

●On Vegetation. Although 54 Rare, Threatened, and Endangered plant species occur within present grazing allotments, there is no strong evidence linking present or past declines in the populations or vigor of these plants with livestock grazing. Nor is there any strong evidence that continued livestock grazing at sustained yield levels will cause future declines. Clearly, monitoring programs are necessary to evaluate the nature and extent of impacts on Rare, Threatened, or Endangered species due to grazing and the changes in plant populations which ensue. Many species such as those which occur in the Clark Mountain Allotment: (Penstemon calcareus, Buddleja utahensis, occur on limestone cliffs and steep rocky slopes where cattle cannot graze.

An exception may be Astragalus lentiginosus var. sesquimetralis, a State-listed Endangered species. This plant appears to be heavily impacted by burros. Large influxes of domestic livestock into its habitat at Big Sand Springs on the Last Chance Allotment may exacerbate its decline. However, there has been no quantitative evidence presented as yet to suggest that declines are taking place due specifically to grazing. Species of Astragalus can often withstand heavy grazing pressure relative to other species. The major impacts are from trampling by cattle and feral burros. This case will be monitored until such data are collected to resolve the problem.

Some unique plant assemblages (Shadow Valley Artemisia spinescens - Atripex confertifolia, Round Valley Artemisia tridenta are vegetation subclimaxes, probably maintained in their present state by grazing. Except for desert riparian areas, grazing at sustained yield levels would not have any significant impact on desert plant communities as they now stand, because many of them are in part the result of 100 years of continuous grazing. Large scale vegetational changes would not be expected unless grazing levels are increased tremendously (as could occur with unchecked growth of burro populations in some areas) or grazing (both livestock and burros) is completely eliminated.

In areas where livestock grazing will be reduced or terminated, the vegetation structure and composition would slowly change.

An example of vegetation change in a particular region is available through analysis of late 19th century cadastral survey records and numerous early (Ca. 1920) photographs from the east slope of the Sierra. Quite clearly, perennial bunch grasses, such as Indian rice grass and desert needle grass have undergone severe declines in the past 100 years. Old photographs show influxes of Joshua trees into areas where they were either absent or very sparse. Although some vegetation change has occurred in the Southwestern desert due to short-term climatic changes (Hastings and Turner 1965), the decline of the perennial grasses and influxes of Joshua tree and shrubs are undoubtedly a direct result of livestock grazing. At the same time, an increase in the relative amounts of annual plant species, both native and, especially, introduced (Erodium, Schimus) occurred.

Where both livestock and burro grazing cease, the eventual resurgence of perennial grasses would be encouraged. The time factor involved in recovery would depend to a large extent upon the climatic pattern during the recovery period. It could be as short as 20 to well over 100 years. Shrubs would tend to decline, especially in areas where increased standing crop provide enough fuel to carry range fires. These fires, if they occur frequently, would further favor perennial grasses and those shrubs which are adapted to fires. Introduced and native annuals would eventually decline relative to perennial grasses and fire-adapted shrubs. However, these introduced annuals should be considered to be ecologically stable and cannot be eliminated by any known management practices (Heady, in Barbour and Major, 1977). They will always be present to some extent, especially in disturbed areas and peripheral habitats.

Since riparian areas are heavily used by range cattle, they are subject to accelerated bank erosion, sediment deposition, and fouling from feces. As a result, the composition of the stream community may change to reflect the increased nutrient and sediment load (increased density of algae and rooted aquatics).

In the No Action Alternative, there are 160,000 AUMs (perennial and annual forage) on 54 allotments. Grazing could impact 39 unique plant assemblages (UPAs) ranging from a 1 percent areal extent in the least disturbed UPA to a potential of 100 percent in the most extensively impacted area. Some UPAs probably owe their present existence to past and present grazing patterns. The extensive Big Sagebrush stands in Round Valley and the Bud Sagebrush-Shadscale association in the Shadow Valley (East Mojave) are good examples. We know from analysis of old photographs from the east slope of the Sierra and comparison with present site vegetation that Joshua trees have moved into grazed areas where they were previously absent. The high density of Joshua trees in the Cima Dome Joshua Tree forest could be a response to grazing. On the other hand some UPAs, such as the Lanfair Valley Desert Grassland, are in a state of deterioration due to high levels of impact on the perennial grasses. Even at sustained yield levels, grazing creates changes in the visual aspects of the vegetation.

In addition, in the No Action Alternative 49 Rare, Threatened, or Endangered plant species could be impacted. However, the nature, extent, and results of these impacts will remain unclear without specific monitoring.

In the Protection, Balanced, and Use Alternatives, the AUMs (perennial forage only) were allocated at 74,700, 79,200, and 83,100, respectively, over 67 allotments. Potential impacts on 42 UPAs would be expected with extent of impacts ranging from less than one percent to 100 percent of the UPA. Also, 54 Rare, Threatened, or Endangered plants lie within the 67 allotments. Most would be subject to livestock grazing. The results of this interaction in terms of changes in the vigor and population numbers of the plant species in question are largely unknown.

In the Protection Alternative the No Grazing Subalternative is addressed. No grazing would eliminate all potential impacts to vegetation and would change the structure and composition of the grazed areas.

The changes in Mojave Desert vegetation which might be brought about by cessation of grazing are speculative. In the eastern Mojave, the end of grazing would probably favor perennial grasses over shrubs and annuals. Palatable shrubs would probably increase relative to nonpalatable species. An increase in perennial grasses to pre-grazing levels might alter the relationships between fire and vegetation in this region. The increase in standing crops would carry range fires more readily. The tendency of the vegetation to change toward grassland would be further reinforced. This area was in fact described as a desert grassland prior to the onset of grazing in the nineteenth century (see Eastern Mojave Unit Resource Analysis, BLM, 1976).

The overall rating of the impacts of No Action on vegetation as negative was due primarily to: 1) the lack of well organized range improvements which would distribute domestic grazing animals more evenly throughout the various allotments, thus preventing local or spot overgrazing; 2) present range and condition trends; and 3) the rapid recruitment of feral burro herds which together with wild horses are already overdrafting on the available AUMs in many allotments (Livestock Grazing Element, Table G-1).

Upon full implementation and compliance, positive impacts would occur on the vegetation of all allotments relative to its present condition. The exceptions are those allotments wherein burro reduction is either lacking or is not substantial (i.e., less than 50 percent sustained reduction of 1979 estimated numbers). Several allotments or proposed allotments (Pilot Knob, Superior Valley, Afton Canyon, Chemehuevi, Homewood Canyon, and Ford Dry Lake Annex) are classified as ephemeral range. As such, no ephemeral AUMs are allocated for burros, but neither are perennial AUMs. These allotments show negative impacts in all alternatives, since burros and/or wild horses are still present, feeding on the vegetation and roaming uncontrolled. No explicitly stated plans for reduction in numbers are presented for those herd management areas which occur in Pilot Knob, Superior Valley, or Afton Canyon. Sufficient reduction in burro numbers does not take place in the remaining allotments to substantially alleviate grazing stress on the vegetation.

The impacts of grazing on range condition, trend, and forage production, over 20 years, is shown on tables PE-13 and PE-14. -(See Appendix 11 for Methodology)

The Protection, Balanced, and Use Alternatives are combined in these tables because total forage allocations vary a maximum of 2 percent in the alternatives and no significant impact differences are identifiable. The forage allocations to wild horses and burros, livestock and wildlife are shown in the grazing plan element. The AUM projections for each allotment and each alternative is based on the estimated change in carrying capacity.

Table PE-13

PERENNIAL VEGETATION CONDITION AND TREND BY ALTERNATIVE/ALLOTMENT

Condition and Trend (20 years)

Allotment	Present Condition/Trend[a]	Alternatives		
		No Action	Protection-Balanced-Use	No Grazing
Fish Lake Valley	G/S	G/S	G/S	G/I
Bar 99	G/S	G/I	G/I	G/I
Deep Springs	F/S	F/D	F/I	G/I
Last Chance	F/S	F/D	F/I	G/S
Oasis Ranch	G/S	G/S	G/S	G/I
South Oasis	F/S	F/D	F/I	G/S
Darwin	F/S	P/D	G/S	G/S
Hunter Mountain	F/S	P/D	G/I	G/I
Lacey-Cactus McCloud	F/S	P/D	G/I	G/I
Olancha Common	G/S	G/I	G/S	G/I
Tanawee Common	F/S	F/S	F/I	G/S
Oak Creek	F/S	F/S	F/S	G/S
Rudnick Common	F/S	P/D	G/S	G/S
Warren	F/S	F/S	F/S	F/I
Walker Pass Common	F/S	P/D	G/S	G/I
Pahrump Valley	F/S	F/S	F/S	F/I
Hanson Common	G/S	G/D	G/S	G/I
Harper Lake	G/S	G/I	G/I	E
Valley Well	F/D	P/S	F/S	G/S
Newberry/Ord.	F/S	F/D	F/I	G/S
Rattlesnake Canyon	G/S	G/S	G/S	G/D
Whitewater Canyon	G/I	G/S	G/S	G/D
Clark Mountain	F/S	F/D	F/I	G/I
Colton Hills	F/I	F/D	G/I	G/I
Cresent Peak	G/I	G/S	G/I	E
Granite Mountain	P-G/I	P/S	G/I	G/I
Gold Valley	G/I	G/D	G/I	E
Horsethief Springs	F/S	F/S	F/I	G/I
Kessler Springs	G/I	G/S	G/I	E
Lanfair Valley	F-G/I	G/D	G/I	E
Round Valley	P/D	P/S	P/I	F/I
Valley View	F/I	F/D	G/I	G/I
Valley Wells	F/I	F/D	F/I	G/S
Jean Lake	G/S	G/S	G/S	G/I
Lazy Daisy	G/S	G/S	G/I	E

a) Legend:

Condition
E = Excellent
G = Good
F = Fair
P = Poor

Trend
I = Increasing
S = Stable
D = Declining

Table PE-14

PERENNIAL VEGETATIVE FORAGE PRODUCTION BY ALTERNATIVE/ALLOTMENT

Allotments	Present		Projected After 20 Years					
	Forage Production Lbs/Ac	Carrying Capacity AUMs	No Action Alternative		Protection-Balanced-Use		No Grazing Alternative	
			Lbs/Ac	AUMs	Lbs/Ac	AUMs	Lbs/Ac	AUMs
Fish Lake Valley	34.7	52	34.7	52	34.7	52	45.1	68
Bar 99	22.2	307	25.5	352	25.5	352	28.9	399
Deep Springs	28.8	1250	26.2	1139	46.1	2002	59.0	2564
Last Chance	34.5	3300	27.6	2640	60.4	5778	70.7	6764
Oasis Ranch	30.3	700	30.3	700	39.4	910	48.5	1122
South Oasis	40.9	450	34.8	383	57.3	630	69.5	764
Darwin	39.5	77	29.6	58	67.2	931	67.2	131
Hunter Mountain	45.2	2520	29.8	1963	92.7	5169	106.2	5922
Lacey-Cactus McCloud	15.0	6351	9.9	4186	35.2	14891	39.8	16830
Olancha Common	51.6	758	67.1	871	59.3	985	74.8	1099
Tanawee Common	58.1	2517	58.1	2517	81.3	3522	98.8	4279
Oak Creek	99.0	16	99.0	16	99.0	16	128.7	21
Rudnick Common	60.4	10000	48.3	7951	102.7	17006	114.8	19014
Warren	93.2	55	93.2	55	93.2	55	111.8	66
Walker Pass Common	59.4	4500	47.5	3598	106.9	8098	112.9	8553
Pahrump Valley	44.3	550	44.3	550	44.3	550	57.6	715
Hanson Common	43.2	1395	41.0	1325	52.5	1696	64.8	2094
Harper Lake	77.0	1000	100.1	1300	100.1	1300	134.8	1751
Valley Well	51.2	24	30.7	20	56.3	27	69.1	45
Newberry/Ord.	57.6	1400	54.7	1329	69.1	1679	97.9	2378
Rattlesnake Canyon	58.0	1200	58.0	1200	63.8	1320	55.0	1137
Whitewater Canyon	55.2	1500	55.2	1500	60.7	1649	52.2	1417
Clark Mountain	30.5	2200	24.4	1759	48.8	3519	67.1	4836
Colton Hills	21.3	3100	19.6	2853	34.1	4960	38.3	5571
Cresent Peak	50.7	1600	50.7	1600	65.9	2079	88.0	2798
Granite Mountain	15.4	4313	11.6	3236	26.2	7426	30.8	8592
Gold Valley	74.8	1200	68.8	1102	104.7	1679	149.6	2397
Horsethief Springs	24.5	2700	24.5	2700	39.2	4315	50.2	5516
Kessler Springs	35.9	8500	34.9	8245	41.3	9776	62.8	14835
Lanfair Valley	37.9	13000	35.3	12091	55.0	18831	66.0	22741
Round Valley	44.3	30	44.3	30	70.9	48	117.4	79
Valley View	32.8	9000	30.2	8282	45.9	12593	59.0	16180
Valley Wells	20.8	5000	19.8	4745	27.0	6486	35.4	8483
Jean Lake	68.9	400	68.9	400	68.9	400	82.7	479
Lazy Daisy	6.5	3000	6.5	3000	8.5	3912	9.5	4333

on Wildlife. The impacts to wildlife of 55 current grazing allotments and 13 proposed allotments in the Protection, Use, and Balanced Alternatives were evaluated using the No Action situation (at present time) as a baseline for comparison. The impacts of allotments in the No Action Alternative were based on effects expected if the current 1979 situation continues for the next 20 years. The overall impact of current allotments in the No Action Alternative would be highly negative; the Use Alternative would have negative impacts; and both the Balanced and Protection Alternatives would have no substantial positive or negative impacts. Proposed allotments would have highly negative impacts in the Use, Balanced, and Protection Alternatives. No impacts of proposed allotments were assessed under the No Action Alternative, as grazing is not taking place currently in these areas. The overall impact of each alternative was assessed by determining the effects on individual allotments (see text tables PE-15 and PE-16), then calculating a mean.

Table PE-15

IMPACTS TO WILDLIFE OF 55 CURRENT GRAZING ALLOTMENTS

Impact	High Positive	Positive	No Substantial Impact Over 1979 Level	Negative	High Negative
No Action	1	0	0	3	51
Use	1	3	6	21	24
Balanced	3	10	14	15	13
Protection	3	19	17	8	8
No Grazing	38	17	0	0	0

Table PE-16

IMPACT TO WILDLIFE OF 13 PROPOSED GRAZING ALLOTMENTS

	High Positive	Positive	No Substantial Impact	Negative	High Negative
No Action	--	--	--	--	--
Use	0	0	0	7	6
Balanced	0	0	0	7	6
Protection	0	0	0	8	5
No Grazing	--	--	--	--	--

Under the No Action Alternative, the overall impact of current allotments on wildlife would be highly negative. Twenty-four allotments (44 percent) are currently grazed at levels over carrying capacity and thirty allotments (55 percent) are in fair or poor condition (see the text table, PE-17). Wild horses and/or burros occur in 22 allotments (40 percent) and 14 of these allotments (65 percent) are in fair or poor condition (see text table PE-18). Given these conditions, wildlife habitat and numbers in general would be expected to decline in the No Action Alternative. Sensitive areas such as riparian and wash habitats and their associated species would decline severely. In addition, there are no allotment management plans under the No Action Alternative and no forage would be specifically allocated to wildlife species. Twenty-seven percent of Desert Bighorn Sheep range occurs within current grazing allotments, with sixteen allotments having Bighorn herds. Under the No Action Alternative, the current declining trend of many of the Bighorn herds would continue. Extirpation of Bighorn may occur in the Hunter Mountain and Lacy-McCloud Cactus allotments due to the overallocation of forage and increasing burro herds. Severe declines would occur in the Last Chance, Clark Mountain, Colton Hills, Granite Mountain, Gold Valley, and Lazy Daisy allotments.

Fifty-three percent of the Desert Tortoise range occurs within current grazing allotments. (This includes 43 percent of the areas with tortoise densities of 20-50 individuals/mi^2, 64 percent of 50-100/mi^2, 65 percent of 100-50/mi^2, and 74 percent of over 250/mi^2.) Tortoises occur in 31 of the current allotments; numbers would decline severely in all of them.

Table PE - 17

RANGE CONDITION AND TREND OF 55 CURRENT GRAZING ALLOTMENTS

		Condition				
		Excellent	Good	Fair	Poor	Total
Trend	Improving	0	5	5	1	11
	Stable	0	20	18	0	38
	Declining	0	0	5	1	6
	Total	0	25	28	2	55

Table PE - 18

RANGE CONDITION AND TREND OF CURRENT ALLOTMENTS WITH WILD HORSES AND BURROS

		Condition				
		Excellent	Good	Fair	Poor	Total
Trend	Improving	0	3	4	1	8
	Stable	0	5	8	0	13
	Declining	0	0	1	0	1
	Total	0	8	13	1	22

Under the Protection, Balanced, and Use Alternatives, management practices within the Livestock Grazing Element regarding wildlife resources would be most beneficial in classes C and L. Therefore, the greatest positive impact to wildlife would occur in the Protection Alternative and the greatest negative impact would be expected in the Use Alternative due to multiple use class distribution. However, implementation of management stipulations may be difficult, as many allotments occur in more than one class. Within multiple use classes C and L, riparian areas would improve substantially and wildlife species associated with these areas would be greatly benefited. Forage allocation to allow for population increases and the prescribed management practices in classes C and L for the Bighorn Sheep and Desert Tortoise would benefit these species by reversing declining trends in some areas, reducing the rate of decline in others, or allowing some areas to stabilize.

The cumulative impacts of all allotments in the Protection and Balanced Alternatives on wildlife resources would be no substantial positive or negative impacts. While habitat quality and population trends in some areas would improve, they would decline in others. The Use Alternative would have an overall cumulative negative impact on wildlife resources.

Burro forage allocation would be the greatest in the Protection Alternative, which would locally negate many of the positive effects of the multiple use class guidelines. The impact of burros on wildlife in allotments cannot be compared with livestock impacts, as burros are not regulated by season of use or maximum utilization levels and their distribution within the allotment cannot be controlled. Burros also range into areas of the allotments which are inaccessible to livestock and where the more sensitive wildlife resources frequently occur. In allotments where burros occur, wildlife would be most severely impacted in the Protection Alternative. Impacts not mitigated by the conflict resolution process include the effect of wild horses and burros in allotments on wildlife, as well as other factors such as the effects of range improvements and grazing systems on wildlife.

Wildlife habitat quality would be expected to improve for most species under the No Grazing Alternative. Wildlife resources would be particularly benefited in the 30 allotments which are currently in only fair or poor condition. The removal of all domestic livestock would result in greater forage reserves for herbivorous wildlife species. Riparian and wash habitats would improve significantly, providing asociated wildlife species with increased forage and protection cover. The management objectives for wild horse and burro numbers would remain as stated in the Protection Alternative and impacts to wildlife would remain as described in that element.

Table PE-19 summarizes the impacts of the livestock grazing element by allotment.

Table PE - 19

IMPACTS OF THE LIVESTOCK GRAZING ELEMENT ON WILDLIFE

Allotment	No Action Alternative	Protection Alternative	Balanced Alternative	Use Alternative	No Grazing Alternative
1) Fishlake Valley	◑	⦶	⦶	◑	⊕
2) Bar 99	◑	⦶	⦶	◑	⊕
3) Deep Springs	●	○	○	●	⦶
4) Last Chance	●	○	○	◑	⦶
5) Osis Ranch	●	⦶	⦶	◑	⊕
6) South Oasis	●	○	○	⦶	⦶
7) Darwin	●	○	○	●	⊕
8) Hunter mountain	●	○	○	○	⦶
9) Lacey-Cactus-McCloud	●	●	●	●	⦶
10) Olancha Common	◑	⦶	◑	◑	⊕
11) Tunawee Common	●	◑	●	●	⦶
12) Antelope Valley	●	●	●	●	⊕
13) Bissel	●	●	●	●	⊕
14) Cantil Common	●	○	○	●	⊕
15) Monolith Cantil	●	⦶	◑	◑	⊕
16) Oak Creek	●	●	●	●	⊕
17) Rudnick Common	●	●	●	●	⊕
18) Warren	●	●	●	●	⊕
19) Walker Pass	●	◑	◑	◑	⊕
20) Pahrump Valley	●	○	○	●	⊕
21) Hanson	●	⦶	⦶	◑	⊕
22) Boron Sheep	●	◑	◑	◑	⊕
23) Buckhorn Canyon	●	○	●	●	⊕
24) Goldstone	●	◑	◑	◑	⊕
25) Granite Mountains	⊕	○	○	○	⊕
26) Gravel Hills	●	⦶	◑	◑	⊕
27) Harper Lake	●	⦶	◑	◑	⊕
28) Lava Mountains	●	⦶	⦶	⦶	⊕
29) Pilot Knob	●	◑	◑	●	⊕
30) Shadow Mountains	●	◑	●	●	⊕
31) Spangler Hills	●	⦶	◑	◑	⊕
32) Stoddard Mountain	●	○	●	●	⊕
33) Superior Valley	●	○	◑	◑	⊕
34) Valley Well	●	○	●	●	⊕
35) Newberry / Ord	●	○	○	●	⦶
36) Rattlesnake Canyon	●	⦶	⦶	⦶	⊕
37) Whitewater Canyon	●	⊕	⊕	⊕	⦶
38) Afton Canyon	●	○	◑	●	⊕
39) Clark Mountain	●	○	○	●	⦶
40) Colton Hills	●	⦶	○	◑	⦶
41) Crescent Peak	●	⊕	⊕	○	⊕
42) Cronese Lake	●	○	○	●	⊕
43) Granite Mountain	●	◑	◑	●	⦶
44) Gold Valley	●	⊕	⊕	○	⦶
45) Horsethief Springs	●	◑	◑	●	⊕
46) Kessler Springs	●	⦶	⦶	○	⦶
47) Lanfair Valley	●	○	○	◑	⦶
48) Piute Valley	●	⦶	⦶	◑	⊕
49) Round Valley	●	●	●	●	⊕
50) Valley View	●	⦶	○	◑	⦶
51) Valley Wells	●	⦶	◑	◑	⦶
52) Ford Dry Lake	●	⦶	◑	◑	⊕
53) Jean Lake	●	⦶	⦶	○	⊕
54) Lazy Daisy	●	⦶	⦶	◑	⦶
55) Sheep Driveway	●	●	●	●	⊕

Table PE - 19 (cont.)
IMPACTS OF THE LIVESTOCK GRAZING ELEMENT ON WILDLIFE

Allotment PROPOSED	No Action Alternative	Protection Alternative	Balanced Alternative	Use Alternative	No Grazing Alternative
56) Tecopa		◑	●	●	
57) Rattlesnake Cyn Annex		◑	◑	◑	
58) Johnson Valley		●	●	●	
59) Ludlow		◑	◑	◑	
60) Round Mountain		◑	◑	◑	
61) Chemehuevi		●	●	●	
62) Rice Valley		◑	◑	◑	
63) Palen		◑	◑	◑	
64) Ford Dry Lake Annex		●	●	●	
65) Homewood Canyon		●	●	●	
66) Death Valley Junction		◑	◑	◑	
67) Lathrop Well		◑	◑	◑	
68) Granite Mtn Annex		●	●	●	

Though not obvious in the above table, there are ten allotments which require additional study to determine if further grazing adjustment can better meet the wildlife objectives of the Protection Alternative by improving range condition and trend. Such adjustments may involve either reductions in livestock or burro use depending on the additional analysis. The conflicts by allotment are shown below in Table PE-20.

Table PE-20

ALLOTMENTS REQUIRING FURTHER STUDY FOR ADJUSTMENT TO WILDLIFE OBJECTIVES

ALLOTMENT	RESOURCE CONFLICT
Last Chance	Livestock and burro use with Bighorn and Mule Deer range on one-third of allotment
Hunter Mountain	Livestock and burro use with Mule Deer and Bighorn range
Lacy-McCloud Cactus	Livestock/burro use with Desert Bighorn, Mule Deer, and Inyo Brown Towhee habitat, especially Towhee riparian habitat and surrounding forage area
Tanawee	Livestock and burro use with Mule Deer range and East Sierra unique habitat
Colton Hills	Livestock and burro use with Bighorn and Mule Deer habitat
Kessler Springs	Livestock and burro use with Bighorn and Mule Deer habitat
Lanfair Valley	Livestock and burro use with Bighorn and Mule Deer habitat
Valley View	Livestock and burro use with Bighorn and Mule Deer habitat
Valley Wells	Livestock and burro use with Mule Deer range
Lazy Daisy	Livestock and burro use with Bighorn and Mule Deer habitat

● On Cultural and Native American Resources. Grazing frequently causes breakage of surface artifacts, destruction of archaeological features, and loss of information in the context of their occurrence through trampling and general displacement of soil.

Many areas with material cultural resources also have a special significance to traditional Native Americans which is adversely affected by grazing activities. Cattle grazing in areas of traditional occupation and grave sites is of the utmost concern to many Native Americans. Grazing activities can also result in the consumption by domestic livestock of vegetation which in some cases still plays an important role in Native American domestic and religious life.

The degree of impact which grazing may have on cultural resources is a factor of the density and length of time which grazing would take place and the nature of the remains present. These factors differ by plan alternative. It can be anticipated that the moderately reduced levels of grazing under the Protection, Balanced, and Use Alternatives, respectively, would have a less severe impact on cultural resources than the No Action Alternative. The development of springs, wells, and other water sources and the construction of fences and roads correlate with grazing densities and distribution. Each of these activities can have a direct and deleterious impact on cultural resources and Native American values. The increased access to grazing allotments may be expected to contribute to the indirect impacts to cultural values.

● On Visual Resources. Range management facilities would not create significant visual impacts.

● On Wilderness. There will be no significant impact to wilderness values under any of the alternatives. Ecological features which contribute to wilderness values and opportunities within proposed wilderness designations would be adequately protected under all alternatives.

● On General Recreation. The effects of this element on recreation would be insignificant across all alternatives. Adverse impacts created by fencing would be mitigated through the use of gates and cattle-grounds on access routes. Depending on the perspective of the user, the presence of livestock would either supplement or detract from this recreational experience.

Some adverse impacts to hunting opportunities would occur in areas where livestock concentrate in sufficient numbers to damage vegetation/wildlife habitat.

The No Grazing Subalternative would have no significant desertwide impact to recreation.

● On Vehicle-oriented Recreation. The No Action Alternative would have no impact on vehicle-oriented recreation. All alternatives of this element and the No Grazing Subalternative would have no significant impact on vehicle-oriented recreation. The alternatives would call for development of 54 allotment management plans on 4.5 million acres. There would be potential for increased access due to the construction of new roads and for limiting access due to the construction of fences; however, until the AMPs are completed, it would not be possible to assess these impacts.

● On Livestock. Impacts on livestock are assessed primarily on the basis of how future decisions would affect the number, vigor, and performance of the livestock. Impacts from decisions regarding management prescriptions and forage allocations to competing uses (e.g., burros or wildlife) are particularly important.

Under the No Action Alternative there will be no impact on cattle numbers from implementation of this element. However, the assumption is made that wild horse and burro numbers would be controlled at present levels. Past experience indicates increasing burro numbers despite reduction efforts. If this trend were to continue, forage would be depleted; this would negatively affect the number of cattle that could be supported by the range.

Under the Protection Alternative cattle grazing would be affected negatively because of a 23 percent reduction in cattle numbers; early spring restrictions on 843,000 acres of crucial Desert Tortoise habitat, and the accommodation of nearly 1,110 burros and 70 wild horses within grazing allotments. The positive impacts of range improvements only partially compensate for cattle reductions and restrictions. Cattle numbers will probably be reduced further than is shown due to the restrictions making marginal operations submarginal.

Under the Balanced Alternative, negative impacts are less than in the Protection Alternative. There would be a 19 percent reduction in cattle numbers, early spring restrictions on 529,000 acres of Desert Tortoise habitat, and the accommodation of 853 burros and 50 wild horses within grazing allotment boundaries. The positive effects of range improvements tend to counterbalance the reductions and restrictions more so than in the Protection Alternative.

Less impact on cattle grazing would result under the Use Alternative. There would be a 13 percent reduction in cattle numbers, early spring restrictions on 32,640 acres of crucial Desert Tortoise habitat, and the accommodation of nearly 600 burros and 30 wild horses. The positive effects of range improvements, mainly water developments, nearly compensate for the negative impacts cited above. Management perscriptions related to forage improvement through vegetation manipulation by mechanical and/or chemical means has not been demonstrated as being feasible for California desert ranges.

The No Grazing Subalternative of the Protection Alternative would leave a highly negative impact on cattle numbers since all cattle would be removed from the CDCA.

Sheep numbers would not be impacted by the No Action Alternative. Under the Protection Alternative severe sheep grazing restrictions would be imposed in approximately 545,000 acres of crucial Desert Tortoise habitat within sheep grazing allotments. These restrictions would greatly limit the amount of grazing that could take place. The limits would be imposed both in terms of numbers and the duration of the grazing season. Since AUMs on ephemeral range are determined yearly, these reductions would not be readily evident until grazing leases are issued. The grazing season in crucial Desert Tortoise habitat would be reduced about 20 percent and the amount of forage allowed for grazing will be decreased by more than half.

Implementation of the Balanced Alternative would result in severe sheep grazing restrictions on approximately 118,000 acres of crucial Desert Tortoise habitat with somewhat less limiting restrictions on an additional 520,000 acres within sheep grazing allotments. The rationale for these impacts is the same as in the Protection Alternative (see above).

Under the Use Alternative, negative impacts would result from severe sheep grazing restrictions on 3,200 acres (compared to 545,000 acres for the Protection Alternative), with somewhat less limiting restrictions on another 467,000 acres of crucial Desert Tortoise habitat within sheep grazing allotments. These impacts will be much reduced over those in the Protection and Balanced Alternative.

Under the No Grazing Subalternative of the Protection Alternative, the impact to sheep grazing would be highly negative. No sheep would be allowed on the public lands within the CDCA.

● On Socioeconomic Values. Reductions in livestock AUMs on perennial range would be the result of adjustments to bring grazing allocations with range carrying capacity for use by all species. Restrictions on ephemeral range would result primarily from constraints to protect Desert Tortoises.

Under the No Action Alternative, all allotments would continue to operate. No new allotments would be permitted. No significant socioeconomic impacts would result because no change occurs.

Under the Protection Alternative, ephemeral allotments primarily grazed by sheep would be most heavily impacted. Later turnout dates (up to 30 days) would deprive livestock operators of forage at a critical time of year. Most sheep operators would be deprived of forage at a time they would be fattening lambs for sale. Twenty-seven existing allotments would have delayed turnout dates due to Desert Tortoise habitat constraints. Livestock AUMs on perennial forage would be reduced by 27 percent all on allotments classified as ephemeral/perennial range type. Availability of ephemeral forage on these allotments would depend upon a year-by-year authorization by BLM, thereby increasing the uncertainty of forage supply for some operators.

Two ranching operations would be reduced to marginal size for continued operation. One other ranch would probably not be operable. Four other cattle operators would have their allotments so reduced or constrained that the method of operating the ranch would have to be changed entirely.

Under the No Grazing Subalternative, no grazing would be allowed on any of the allotments. This would prevent use of much of the private grazing land also. Fencing of boundaries would be necessary in some cases. Twenty existing cattle operations would cease to function.

Although few sheep operators use their allotments every year, cancellation of all sheep allotments would probably force half of them out of the sheep business. The others would have much less profitable operations due to the loss of the low-cost desert forage for fattening lambs.

Under the Balanced Alternative, the impact would be almost the same as under the Protection Alternative. Perennial type allotments would increase AUMs by 12 percent. Ephemeral/perennial type allotments would have their AUM base reduced by 26 percent.

Ephemeral allotments, in most cases, would have forage availability in poor forage years reduced by Desert Tortoise habitat protection constraints. Dates of turnout would be delayed two to three weeks on ephemeral allotments.

Two ranches would become marginal or submarginal operations due to AUM reductions; others would become more dependent upon ephemeral production.

Under the Use Alternative, a relatively small area would be subject to a 30-day delay in turnout dates. Instead, turnout would be delayed by two to three weeks in most years on ephemeral range. There would be less restriction on the use of forage in crucial Desert Tortoise habitat areas. Base livestock AUMs on ephemeral/perennial allotments would be reduced by 19 percent. On perennial allotments livestock forage would be increased by 22 percent as a result of lower burro populations. None of the ranch operations would become economically marginal due to AUM reductions, although some would have to be more dependent upon ephemeral production.

Table GR-1

GRAZING ELEMENT
NO ACTION ALTERNATIVE

Soil	Vegetation[a]	Wildlife	Cultural	Recreation	Socioeconomic
Fish Lake Valley (1)					
All allotments — Severe compaction could occur in limited areas such as watering sites, holding areas and intensively used trails. Problems with wind erosion can occur in areas of concentrated sheep grazing. Movements of flocks of sheep could cause long, continuous erosion fetches of loose soil.	Existing yearly use of forage by livestock (cattle) is 25.7 tons over an allotment of approximately 1,482 acres, a mean forage utilization of 34.8 lb./acre. The average forage utilization throughout the CDCA is about 21.4 lb./acre. Since condition/trend is good/stable, no significant negative impacts on vegetation are expected. However, several years of drought may reverse range trend unless utilization is reduced.	Overall impact: Negative. For potential impacts to species, see Balanced Alternative.	Same as Balanced Alternative.		No change.
Bar 99 (2)					
Same as Allotment 1.	Existing forage use (perennial): Livestock — 151.97 tons/13,671 acres, approximately 22.2 lb./acre. Condition/trend approximately good/stable. No significant negative impacts on vegetation foreseen.	Overall impact: Negative. For potential impacts to species, see Balanced Alternative.	Same as Balanced Alternative.		No change.
Deep Springs (3)					
Same as Allotment 1.	Existing yearly forage use (perennial): Livestock — 618.75 tons/43,028 acres, approx. 28.8 lb./acre. Burros/Wildhorses — 123.8 tons/43,028 acres, approx. 5.8 lb/acre. Wildlife (deer), 21.3 tons/43,028 acres, approx. 1.0 lb./acre. Present overdraft on available forage of 145.04 tons. Range condition is fair/stable. Severe negative impacts on vegetation foreseen at present use levels. Possible impacts on four Rare, Threatened and Endangered Plant Species (RT&EPS) and Unusual Plant Assemblages (UPAs). See Balanced Alternative.	Overall impact: Highly negative. For potential impacts to species, see Balanced Alternative. Wildlife habitat and numbers would decline due to over allocation of existing forage. Burro and horse numbers would have a strong negative impact on wildlife resources due to increased habitat deterioration and direct competition for forage, space and water. Range condition would not improve from fair.	Same as Balanced Alternative.	Same as Balanced Alternative.	

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[a] Forage weights listed are air dry.

Table GR-1 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
		Last Chance (4)			
Same as Allotment 1.	Existing yearly forage use (perennial): Livestock (cattle) – 1,617.2 tons/94,711 acres, approx. 34.1 lb./acre. Burros – 990 tons/94,711 acres, approx. 20.9 lb./acre. Wildlife (Bighorn, deer) 39.1 tons/94,711 acres, approx. .8 lb./acre. Current overdraft on available forage is 1,012.8 tons. Range condition/trend is fair/stable. Severe negative impacts on vegetation foreseen at current use levels. No data available on previous year's ephemeral production and use.	Overall impact: Highly negative. For potential impacts to species, see Balanced Alternative. Wildlife habitat and numbers would decline due to over-allocation of existing forage. Maintaining current burro numbers would result in increased habitat deterioration and competition for forage, space and water. Bighorn Sheep and Mule Deer would decline. Livestock use of a critical water source for Bighorn (Last Chance Spring) may result in loss of this spring to Bighorn and subsequent reduction in their numbers. Range condition would decline from fair.	Same as Balanced Alternative.	Same as Balanced Alternative.	Operates in conjunction with large holdings of public and private land in Nevada.
		Oasis (5)			
Same as Allotment 1.	Existing yearly forage use (perennial): Livestock (cattle) – 324.7 tons/22,894 acres, or 28.4 lb./acre. Wild horses – 2.6 lb./acre. Wildlife (deer) – 3.4 lb./acre. Current overdraft on forage is 47.03 tons. Range condition is good and stable. Negative impacts on vegetation likely, especially during drought.	Overall impact: Highly negative. For potential impacts to species, see Balanced Alternative. Wildlife habitat and numbers would decline due to over-allocation of existing forage. Maintaining current wild horse numbers would result in increased habitat deterioration and competition for forage, space and water. Riparian habitats, such as Cottonwood Creek, and associated species would decline.	Same as Balanced Alternative.	Same as Balanced Alternative.	Allotment would be used along with lands in Nevada.

Table GR-1 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
South Oasis (6)					
Same as Allotment 1.	Existing yearly forage use (perennial): Livestock (cattle) — 236.1 tons/10,884 acres, approx. 43.4 lb./acre. Burros/wild horses — 74.3 tons/10,884 acres, approx. 13.6 lb./acre. Current overdraft on available forage is 87.6 tons. Range condition/trend is fair/stable. Negative impacts on vegetation resulting in decline are foreseen.	Overall impact: Highly negative. For potential impacts to species, see Balanced Alternative. Wildlife habitat and numbers would decline due to over-allocation of forage. Increased habitat deterioration and competition for forage, space and water would occur as a result of wild horse and burro numbers. Range condition would not improve.	Same as Balanced Alternative.		
Darwin (7)					
Same as Allotment 1.	Existing yearly forage use (perennial): Livestock (horses) — 21.3 tons/1,928 acres, approx. 22.1 lb./acre. Burros — 207.90 tons/1,928 acres, approx. 215.7 lb./acre. Range condition/trend is fair/stable. Extremely severe impacts foreseen on vegetation if utilization continues at present levels. Present overdraft on available forage is 191 tons.	Overall impact: Highly negative. For potential impacts to species, see Balanced Alternative. Wildlife habitat and numbers would decline due to over-allocation of existing forage. Maintaining burro numbers would result in increased habitat deterioration and competition for forage, space and water. Riparian habitats, such as Darwin Falls, would deteriorate and associated species would decline.	Same as Balanced Alternative.	Same as Balanced Alternative.	No significant change.
Hunter Mt. (8)					
Same as Allotment 1.	Existing yearly forage use (perennial): Livestock (cattle) — 546.9 tons/55,210 acres, approx. 19.8 lb./acre. Burros/wild horses — 5,672.7 tons/55,210 acres, approx. 205.5 lb./acre. Wildlife (Bighorn, deer) — 79.7 tons/55,210 acres, approx. 2.9 lb./acre. Range condition/trend is fair/stable. Present overdraft on forage is 5,049.5 tons. Extremely severe impacts foreseen on vegetation if utilization continues at present levels.	Overall impact: Highly negative. For potential impacts to species, see Balanced Alternative. Wildlife numbers and habitat would decline greatly due to the extreme over-allocation of existing forage. The Hunter Mt. Bighorn would probably be extirpated. Riparian areas and associated wildlife species would decline severely. Mule Deer would decline severely.	Same as Balanced Alternative.	Same as Balanced Alternative.	Maintains 150-cow rance.

Table GR-1 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
		Lacey-Cactus-McCloud (9)			
Same as Allotment 1.	Existing yearly forage use (perennial): Livestock (cattle) – 2,412.14 tons/418,650 acres, approx. 11.5 lb./acre. Burros/wild horses – 13,018 tons/418,650 acres, approx. 62.2 lb./acre. Wildlife (Bighorn, deer) – 116.3 tons/418,650 acres, approx. .6 lb./acre. Range condition/trend is fair/declining. Present overdraft on available forage is 12,402.7 tons. Extremely severe impacts foreseen on vegetation if utilization continues at present rate.	Overall impact: Highly negative. For potential impacts to species, see Balanced Alternative. Wildlife numbers and habitat would decline due to extreme over-allocation of existing forage. Maintaining burro numbers would result in increased habitat deterioration and competition for forage, space and water. Riparian areas and associated wildlife would decline severely. The Argus Range Bighorn population would probably be extirpated. Mule Deer would decline severely. Habitat for the Inyo Brown Towhee will probably be lost and hence the occurrance of this species in this area.	See Balanced Alternative. Impacts will be similar, although more severe, as no reduction in AUMs will take place.	Same as Balanced Alternative.	No significant impact.
		Olancha Common (10)			
Same as Allotment 1.	Existing yearly forage use (perennial): Livestock (cattle) – 372.24 tons/14,540 acres, approx. 51.2 lb./acre. Range condition/trend is good/stable. Negative impacts on range and vegetation possible during drought due to present high level of utilization.	Overall impact: Negative. For potential impacts to species, see Balanced Alternative.	Same as Balanced Alternative.		
		Tunawee (11)			
Same as Allotment 1.	Existing yearly forage use (perennial): Livestock (cattle, sheep) – 967.23 tons/42,880 acres, approx. 45.1 lb./acre. Burros – 207.9 tons/42,880 acres, 9.7 lb./acre. Wildlife (deer) – 13.37 tons/42,880 acres, approx. .6 lb./acre. Although no overdraft on available forage occurs, range condition is fair/stable, and utilization levels are above average, negative impacts on range/vegetation and declines are possible at present stocking rates.	Overall impact: Highly negative. For potential impacts to species, see Balanced Alternative. Maintaining burro numbers would result in increased habitat deterioration and competition for forage, space and water. Range would not be improved from a fair condition.	Same as Balanced Alternative.	Same as Balanced Alternative.	

Table GR-1 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
Antelope Valley (12)					
Same as Allotment 1.	Existing yearly forage use (perennial): Livestock (sheep) — 160.9 tons/ 6,500 acres, approx. 49.5 lb./acre. Ephemeral forage production could exceed 600 lb./acre during a year of above average precipitation or be less than 200 lb./acre in a drought year. Current range condition/trend is fair/ stable. No overdraft, but unless minimum ephemeral production levels (i.e., 200 lb./acre) are established a declining trend may result.	Overall impact: Highly negative. For potential impacts to species, see Balanced Alternative. Current fair condition of range would not improve.	Same as Balanced Alternative.		
Bissel (13)					
Same as Allotment 1.	Previous year's forage use (ephemeral): Livestock (sheep) — 142.46 tons/ 4,002 acres, approx. 71.2 lb./acre. Wildlife (tortoises) — 7.43 tons/ 4,002 acres, approx. 3.7 lb./acre. Current range condition/trend is fair/ stable. Comments same as for Antelope Valley.	Overall impact: Highly negative. For potential impacts to species, see Balanced Alternative. Range would remain in only fair condition. Tortoise numbers would decline 40% within 5 years.	See Balanced Alternative. With no reduction in AUMs, moderate negative impacts will occur due to damage and displacement by sheep grazing.		
Cantil Common (14)					
Same as Allotment 1.	Previous year's forage use (ephemeral): Livestock (sheep) — 9,405 tons/ 407,800 acres, approx. 46.1 lb./acre. Wildlife (tortoise) — 132.2 tons/ 407,800 acres, approx. .6 lb./acre. Current range condition/trend is fair/ improving. Comments same as for Antelope Valley.	Overall impact: Highly negative. For potential impacts to species, see Balanced Alternative. Tortoise numbers would decline 50% in the next 5 years. Range condition would not improve from fair.	Same as Balanced Alternative.	Same as Balanced Alternative.	16 operators.
Monolith-Cantil (15)					
Same as Allotment 1.	Previous year's forage use (ephemeral): Livestock (sheep) — 742.5 tons/ 49,926 acres, approx. 29.7 lb./acre. Wildlife (tortoise) — 64.8 tons/ 49,926 acres, approx 2.6 lb./acre. Range condition/trend is good/stable. No serious impacts on range/vegetation if managed at present use levels.	Overall impact: Highly negative. For potential impacts to species, see Balanced Alternative. Tortoises would decline 50% within 5 years.	Same as Balanced Alternative.	Same as Balanced Alternative.	

Table GR-1 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
Oak Creek (16)					
Same as Allotment 1.	Existing yearly forage use (perennial): Livestock (cattle) – 7.92 tons/160 acres, approx. 99 lb./acre. There is no overdraft but use levels are very high. Range condition/trend is fair/stable, and could worsen if stocking rate is not reduced. No data available on previous year's ephemeral production and use.	Overall impact: Highly negative. For potential impacts to species, see Balanced Alternative. Range condition would not improve from fair.	Same as Balanced Alternative.		No change.
Rudnick Common (17)					
Same as Allotment 1.	Existing yearly forage use (perennial): Livestock (cattle) – 12,973.95 tons/202,973 acres, approx. 127.8 lb./acre. Range condition/trend is poor/declining. Use level is very high. Range and vegetation condition will continue to decline if stocking rates are not reduced. Current overdraft on available forage is 8,024 tons. No data available on previous year's ephemeral production and use.	Overall impact: Highly negative. For potential impacts to species, see Balanced Alternative. Riparian habitat and associated species would deteriorate due to the fair and declining condition of the range. Wildlife numbers and habitat would decline due to allocation of forage greatly over carrying capacity.	See Balanced Alternative. It is felt that no reduction in AUMs will have severe impacts upon cultural resources. Concentration of animals will result in destruction to 8 cultural sites (est.), some due to trampling, etc. Well development, pipelines and catchments may have adverse impacts upon sub-surface remains.		Use would continue to be about 12-13,000 AUMs instead of the 26,000 AUMs permitted.
Warren (18)					
Same as Allotment 1.	Existing yearly forage use (perennial): Livestock (sheep) – 27.23 tons/584 acres, approx. 93.5 lb./acre. Range condition/trend is fair/stable. General comments regarding ephemerals same as for Antelope Valley. No data available on previous year's ephemeral production and use.	Overall impact: Highly negative. For potential impact to species, see Balanced Alternative. Range would not improve from a fair condition.	Same as Balanced Alternative.	Same as Balanced Alternative.	No change.

Table GR-1 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
Walker Pass (19)					
Same as Allotment 1.	Existing yearly forage use (perennial): Livestock (cattle) – 2,598.8 tons/75,000 acres, approx. 69.3 lb./acre. Current overdraft on available forage is 438.1 tons. Range condition/trend is fair/declining. Extremely negative impacts on range/vegetation can be expected of current management levels. No data available on previous year's ephemeral production and use.	Overall impact: Highly negative. For potential impact to species, see Balanced Alternative. Wildlife numbers and habitat would decline due to allocation of forage over carrying capacity. Riparian areas and associated wildlife would decline. Range would decline from a fair condition.	Same as Balanced Alternative.		4 operators in common.
Pahrump Valley (20)					
Same as Allotment 1.	Previous year's forage use (ephemeral): No data available. Existing forage use: Livestock (cattle) – 272.3 tons/12,286 acres, approx. 44.3 lb./acre. Wildlife (Bighorn) – 1.0 tons/12,286 acres, approx. .2 lb./acre. Wildlife (tortoise) – 2.5 tons/12,286 acres, approx. .4 lb./acre. Range condition/trend is fair/stable. Current overdraft on available forage is 53.46 tons. Negative impacts on range/vegetation can be expected at current levels.	Overall impact: Highly negative. For potential impact to species, see Balanced Alternative. Range would not improve from a fair condition. Tortoise population would decline 25% in the next 5 years.	Same as Balanced Alternative.		No significant change.
Hanson (21)					
Same as Allotment 1.	Previous year's forage use (ephemeral): No data available. Existing yearly forage use: Livestock (cattle, sheep) – 690.53 tons/64,000 acres, approx. 21.6 lb./acre. Wildlife (deer) – 53.46 tons/64,000 acres, approx. 1.7 lb./acre. Range condition/trend is good/stable. Current overdraft on available forage is 53.5 tons. Negative impacts on vegetation and reversal of range trend are possible unless stocking rates are reduced.	Overall impacts: Highly negative. For potential impacts to species, see Balanced Alternative. Wildlife habitat and numbers would decline due to allocation of forage over carrying capacity. Mule Deer numbers would decline slightly. Tortoise numbers would decline 50% in the next 5 years.	See Balanced Alternative. Under existing AUMs, impacts will be moderate to severe due to artifact damage and destruction from sheep/cattle grazing.	See Balanced Alternative.	4 operators: 1 cattle, 3 sheep.

Table GR-1 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
Boron Sheep (22)					
Same as Allotment 1.	Previous year's forage use (ephemeral): Livestock (sheep) – 77.7 tons/7,482 acres, approx. 20.8 lb./acre. Wildlife (tortoise) – 2.97 tons/7,482 acres, approx. .8 lb./acre. Range condition/trend is good/stable. No significant impacts on vegetation at this use level. However see comments for Antelope Valley.	Overall impact: Highly negative. For potential impacts to species, see Balanced Alternative. Tortoise numbers would decline 40% within 5 years.	Same as Balanced Alternative.	Same as Balanced Alternative.	
Buckhorn Canyon (23)					
Same as Allotment 1.	Previous year's forage use (ephemeral): Livestock (sheep) – 332.6 tons/21,254 acres, approx. 31.3 lb./acre. Wildlife (tortoise) – 21.8 tons/21,254 acres, approx. 2.1 lb./acre. Range condition/trend is fair/stable. General comments same as for Antelope Valley. Severe impacts to vegetation could occur in dry years unless a minimum 200-lb./acre standing crop (ephemeral) limit be put on approval of lease.	Overall impact: Highly negative. For potential impacts to species, see Balanced Alternative. Tortoise numbers would decline 50% in the next 5 years. Mohave Vole and Western Pond Turtle habitat would deteriorate and these species would decline. Range condition would not improve from fair.	Same as Balanced Alternative.	Same as Balanced Alternative.	
Goldstone (24)					
Same as Allotment 1.	Previous year's forage use (ephemeral): Livestock (sheep) – 83.16 tons/9,006 acres, approx. 18.5 lb./acre. Wildlife (tortoise) – 3.47 tons/9,006 acres, approx. .8 lb./acre. Range condition/trend is good/stable. No significant impacts on vegetation at this use level. However, see comments for Antelope Valley.	Overall impact: Highly negative. For potential impacts to species, see Balanced Alternative. Tortoise numbers would decline 25% in the next 5 years.	Same as Balanced Alternative.		
Granite Mts. (25)					
Same as Allotment 1.	Previous year's forage use (ephemeral): Livestock (cattle) – 27.7 tons/5,714 acres, approx. 9.7 lb./acre. No significant impacts on vegetation expected. This allotment would not be leased under No Action Alternative.	Overall impact: Highly positive. For potential impacts to species, see Balanced Alternative. This allotment would not be leased under the No Action Alternative. Wildlife habitat would improve.	Same as Balanced Alternative.	Same as Balanced Alternative.	Not presently under lease.

Table GR-1 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
Gravel Hills (26)					
Same as Allotment 1.	Previous year's forage use (ephemeral): Livestock (sheep) — 429 tons/128,623 acres, approx. 6.7 lb./acre. Range condition/trend is good/stable. No significant impacts on vegetation expected at this use level. However see general comments for Antelope Valley.	Overall impact: Highly negative. For potential impacts to species, see Balanced Alternative. Tortoise numbers would decline 75% in the next 5 years.	Same as Balanced Alternative.	Same as Balanced Alternative.	
Harper Lake (27)					
Same as Allotment 1.	Previous year's forage use (ephemeral): No data existing. Forage use (perennial): Livestock (cattle — 495 tons/13,535 acres, approx. 73.1 lb./acre. Wildlife (tortoise) — 14.9 tons/13,535 acres, approx. 2.2 lb./acre. Range condition/trend is good/stable. Livestock use is extremely high compared to other ephemeral allotments, see Antelope Valley, above, for possible negative impacts on vegetation and decline in range condition.	Overall impact: Highly negative. For potential impacts to species, see Balanced Alternative. Tortoise numbers would decline 35% in the next 5 years.	Same as Balanced Alternative.	Same as Balanced Alternative.	Continue to be managed as an ephemeral allotment with no preference right or AUM base.
Lava Mts. (28)					
Same as Allotment 1.	Previous year's forage use (ephemeral): Livestock (sheep) — 332.6 tons/16,830 acres, approx. 39.5 lb./acre. Wildlife (tortoise) — 2.48 tons/16,830 acres, approx. .3 lb./acre. Range condition/trend is good/stable. No significant negative impacts foreseen at these use levels. However, see comments for Antelope Valley.	Overall impacts: Highly negative. For potential impacts to species, see Balanced Alternative. Tortoise numbers would decline 50% in the next 5 years.	See Balanced Alternative. Under existing AUMs moderate negative impacts will occur as a result of sheep trampling.		
Pilot Knob (29)					
Same as Allotment 1.	Previous year's forage use (ephemeral): Livestock (cattle) — 1,774.7 tons/98,303 acres, approx. 36.1 lb./acre (perennial impact). Burros — 594 tons/98,303 acres, approx. 12.1 lb./acre (perennial in part). Wildlife (tortoises) — 14.4 tons/98,303 acres, approx. .3 lb./acre. No overdraft, range condition/trend is good/stable. Increasing burro numbers would cause reversal of trend and negative impacts on vegetation within the next 10 years.	Overall impact: Highly negative. For potential impacts to species, see Balanced Alternative. Tortoise numbers would decline 75% in the next 5 years. The Eagle Craggs Bighorn Sheep herd would probably be extirpated. Maintaining burro numbers would result in loss of wildlife habitat and numbers.	Same as Balanced Alternative.		

Table GR-1 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
		Shadow Mt. (30)			
Same as Allotment 1.	Previous year's forage use (ephemeral): Livestock (sheep) – 594 tons/42,538 acres, approx. 27.9 lb./acre. Wildlife (tortoise) – 56.9 tons/ 42,538 acres, approx. 2.7 lb./acre. Range condition/trend is fair/declining. Further negative impacts would result unless stocking rates are lowered and a minimum limit on ephemeral standing crop is placed before pasturing. See Antelope Valley.	Overall impact: Highly negative. Tortoise numbers would decline 50% within 5 years. Range condition would decline from fair.	Same as Balanced Alternative.		
		Spangler Hills (31)			
Same as Allotment 1.	Previous year's forage use (ephemeral): Livestock (sheep) – 376.2 tons/ 66,899 acres, approx. 11.2 lb./acre. Wildlife (tortoise) – 20.79 tons/ 66,899 acres, approx. .6 lb./acre. Range condition good, trend is stable. No foreseeable significant negative impacts on range/vegetation at this use level. However, see Antelope Valley comments.	Overall impact: Highly negative. For potential impacts to species, see Balanced Alternative. Tortoise numbers would decline 50% within 5 years.	Same as Balanced Alternative.	Same as Balanced Alternative.	
		Stoddard Mt. (32)			
Same as Allotment 1.	Previous year's forage use (ephemeral): Livestock (sheep) – 2,807.2 tons/ 270,041 acres, approx. 20.8 lb./acre. Wildlife (tortoise) – 135.14 tons/ 270,041 acres, approx. 1 lb./acre. Range condition/trend is good/stable. No significant impacts on range and vegetation foreseen at this level. However, see comments on Antelope Valley.	Overall impact: Highly negative. For potential impacts to species, see Balanced Alternative. Tortoise numbers would decline 50% within 5 years.	Same as Balanced Alternative.	Same as Balanced Alternative.	
		Superior Valley (33)			
Same as Allotment 1.	Previous year's forage use (ephemeral): Livestock (sheep) – 1,152.4 tons/ 197,232 acres, approx. 11.7 lb./acre. Wildlife (tortoise) – 91.1 tons/ 197,232 acres, approx. 0.9 lb./acre. Range condition/trend good/stable. No significant impacts on range/vegetation foreseeable at current management level, but see comments for Antelope Valley.	Overall impact: Highly negative. For potential impacts to species, see Balanced Alternative. Tortoise populations would decline 30% within 5 years.	Same as Balanced Alternative.	Same as Balanced Alternative.	

Table GR-1 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
		Valley Well (34)			
Same as Allotment 1.	Existing yearly forage use (perennial): Livestock (cattle) – 11.9 tons/640 acres, approx. 37.2 lb./acre. Current range condition/trend, fair/declining. Severe impact on range and vegetation will occur unless stocking rates reduced. No data available on the previous year's ephemeral production and use. See Antelope Valley for general comments.	Overall impact: Highly negative. Range would continue declining from a fair condition. Wildlife habitat and numbers would decline.	Same as Balanced Alternative.	Same as Balanced Alternative.	No change.
		Newberry Ord (35)			
Same as Allotment 1.	Existing yearly forage use (perennial): Livestock (cattle) – 917.7 tons/35,366 acres, approx. 51.9 lb./acre. Burros – 136.62 tons/35,366 acres, approx. 7.7 lb./acre. Wildlife (tortoise) – .48 ton/35,366 acres (ephemeral), approx. .03 lb./acre. Range condition/trend, fair/stable. Current overdraft of 361.4 tons. Negative impacts to range and vegetation will occur at this level of management. No data available on last year's ephemeral production and usage.	Overall impact: Highly negative. For potential impacts to species, see Balanced Alternative. Wildlife habitat would decline due to allocation of forage over carrying capacity. Range condition would not improve from a fair condition. Tortoise numbers would decline 20% in the next 5 years.	See Balanced Alternative. The projected 1,400 AUMs (perennial) and 450 additional (ephemeral) to be expected will have a sustained negative impact on cultural resources (being slightly more damaging than the Balanced Alternative through time).	Same as Balanced Alternative.	Continue to be managed as an ephemeral allotment with no preference right or AUM base.
		Rattlesnake Canyon (36)			
Same as Allotment 1.	Existing yearly forage use (perennial): Livestock (cattle) – 516.78 tons/20,475 acres, approx. 50.48 lb./acre. Wildlife (tortoise) – .05 lb./acre (ephemeral). Range condition/trend is good/stable. No current overdraft on available forage. However use levels are fairly high. Improvement of range and vegetation will not occur at present management levels and severe declines could occur in drought years. No data available on previous year's ephemeral production and usage.	Overall impact: Highly negative. For potential impacts to species, see Balanced Alternative. Tortoise numbers would decline 20% within 5 years. Successful reintroduction of Bighorn Sheep would not be possible.	See Balanced Alternative. The decreased amount of AUMs vis a vis the Balanced Alternative will lessen negative impacts slightly through time. Currently grazing and range improvements have seriously impacted the area. Further grazing will surely erase scientific/cultural values in the utilized area (canyon bottoms, most slopes).	Same as Balanced Alternative.	No significant change.

Table GR-1 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
		Whitewater Canyon (37)			
Same as Allotment 1.	Existing yearly forage use (perennial): Livestock (cattle) – 380.2 tons/42,211 acres, approx. 18.01 lb./acre. Burros – 118.80 tons/42,211 acres, approx. 5.6 lb./acre. Wildlife (deer) – 270.8 tons/42,211 acres, approx. 12.83 lb./acre. Range condition/trend is judged to be good/improving and therefore is at odds with a 27.2-ton overdraft on available forage. Management at current use rates will lead to negative impacts on range and vegetation. No data available on previous year's ephemeral production and use.	Overall impact: Highly negative. For potential impacts to species, see Balanced Alternative. Maintaining burro numbers would result in increased habitat deterioration and competition. Wildlife habitat and numbers would decline due to allocation of forage over carrying capacity. Mule Deer would decline 15% within 5 years.	Same as Balanced Alternative.		No significant change.
		Afton Canyon (38)			
Same as Allotment 1.	Previous year's forage use (ephemeral): Livestock (cattle) – 495 tons/83,650 acres, approx. 11.84 lb./acre. Burros – present but forage use is unknown. Wildlife (Bighorn) – 29.70 tons/83,650 acres, approx. .7 lb./acre (perennial). Range condition/trend is poor/stable, largely due to off-road-vehicle damage. Negative affects on range and vegetation will occur here unless ORV traffic is controlled or stopped.	Overall impacts: Highly negative. For potential impacts to species, see Balanced Alternative. Wildlife habitat and numbers would decline due to allocation of forage over carrying capacity. Cady Mts. Bighorn herd would decline 10% within 5 years. Range would not improve from fair condition.	See Balanced Alternative. Grazing at past levels (1,000 AUMs ephemeral +200 AUMs perennial), has had substantial negative impact on cultural resources, mainly in areas away from human traffic. Continuance of this trend will ultimately degrade the balance of the surface sites particularly the campsite along the ridges in the area.	Same as Balanced Alternative. Range would not improve from a fair condition.	

Table GR-1 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
		Clark Mt. (39)			
Same as Allotment 1.	Existing yearly forage use (perennial): Livestock (cattle) — 926.6 tons/ 75,659 acres, approx. 24.5 lb./acre. Burros — 1,485 tons /75,659 acres, approx. 39.26 lb./acre. Wildlife (Bighorn, deer) — 142.56 tons/75,659 acres, approx. 3.77 lb./acre. Wildlife (tortoise) — 13.32 tons/ 75,659 acres, approx. .4 lb./acre (ephemeral). Current overdraft on available forage is 1,465.2 tons. Range condition/trend is Fair/stable. Extremely negative effects on range and vegetation will occur if grazing by all components occurs at current levels. No data available on previous year's ephemeral production and use.	Overall impact: Highly negative. For potential impacts to species, see Balanced Alternative. Wildlife habitat and numbers would decline due to allocation of forage over carrying capacity. Range condition would not improve from fair. Tortoise numbers would decline 60% within 5 years. Clark Mt. Bighorn herd would decline as much as 75%. Mule Deer would decline as much as 37%. Maintaining burro numbers would result in increased habitat deterioration and loss of wildlife.	Same as Balanced Alternative.	Same as Balanced Alternative.	2 operators in partnership with about 150 cows authorized. Recent use has been less.
		Colton Hills (40)			
Same as Allotment 1.	Existing yearly forage use (perennial): Livestock (cattle) — 1,424.1 tons/ 187,688 acres, approx. 15.18 lb./acre. Burros — 594 tons/187,688 acres, approx. 6.33 lb./acre. Wildlife (Bighorn, deer) — 152.5 tons/187,688 acres, approx. 1.63 lb./acre. Wildlife (tortoise) — 56.43 tons/ 187,688 acres, approx. .6 lb./acre. Current overdraft on available forage is 636.08 tons. Range condition/trend is fair/improving. This is inconsistent with the above overdraft. Negative impacts to range and vegetation will occur if management continues at current levels. No data available on previous year's ephemeral range.	Overall impact: Highly negative. For potential impact to species, see Balanced Alternative. Wildlife habitat and numbers would decline due to allocation of forage over carrying capacity. Maintaining burro numbers would result in increased habitat deterioration and loss of wildlife. Range would not improve from fair condition. Tortoise numbers would decline 35%, Mule Deer 15% and Bighorn Sheep 30% within 5 years.	Same as Balanced Alternative.	Same as Balanced Alternative.	

Table GR-1 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
Crescent Peak (41)					
Same as Allotment 1.	Existing yearly forage use (perennial): Livestock (cattle) – 772.2 tons/31,201 acres, approx. 49.5 lb./acre. Wildlife (Bighorn, deer) – 33.2 tons/31,201 acres, approx. 2.13 lb./acre. Wildlife (tortoise) – 7.92 tons/31,201 acres (ephemeral), approx. 0.51 lb./acre. Current overdraft on existing perennial forage is 13.4 tons. Range condition/trend is good/improving. This determination is not consistent with high-use levels and overdraft. Negative impacts on range and vegetation will occur at current management levels. No data available on previous year's ephemeral production and use.	Overall impact: Highly negative. For potential impact to species, see Balanced Alternative. Wildlife habitat and numbers would decline due to allocation of forage over carrying capacity. Tortoise numbers would decline 40%. Mule Deer and Bighorn would decline slightly.	Same as Balanced Alternative.	Same as Balanced Alternative.	No significant change.
Cronese (42)					
Same as Allotment 1.	Previous year's forage use (ephemeral): Livestock (cattle) – 504.4 tons/63,750 acres, approx. 15.8 lb./acre. No significant impacts foreseen at current use levels. However, see comments for Antelope Valley. Current range condition/trend rating is fair – good/stable. Heavy use in years of below average precipitation would prove deleterious.	Overall impact: Highly negative. For potential impact to species, see Balanced Alternative. Range condition would not improve.	See Balanced Alternative. Sustained use at past levels will result in moderate overall negative impacts and severe local impacts to surface sites.	Same as Balanced Alternative.	
Granite Mt. (43)					
Same as Allotment 1.	Existing yearly forage use (perennial): Livestock (cattle) – 2,334.4 tons/324,861 acres, approx. 14.37 lb./acre. Burros – 1,782 tons/324,861 acres, approx. 10.97 lb./acre. Wildlife (Bighorn, deer) – 313.8 tons/324,861 acres, approx. 1.93 lb./acre. Wildlife (tortoise) – 8.42 tons/324,861 acres, approx. .05 lb./acre. Current overdraft on existing perennial forage is 2,134.94 tons. Range condition/trend is poor – good/improving, a determination which conflicts with the large overdraft. Management at current levels will result in severe declines in vegetation. No data available on ephemeral production and use.	Overall impact: Highly negative. For potential impact to species, see Balanced Alternative. Wildlife numbers and habitat would decline due to the allocation of forage over carrying capacity. Maintaining burro numbers would result in severe habitat deterioration and loss of wildlife. Range condition would not improve. Tortoise numbers would decline 60%, Mule Deer 20%, and Bighorn Sheep 40%. Riparian areas and associated species would deteriorate greatly. The many sensitive wildlife resources occuring in this allotment would decline.	See Balanced Alternative. Grazing at current levels will result in severe negative impacts to surface sites, particularly around the springs and along the mountain/fan interface.	Same as Balanced Alternative.	

Table GR-1 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
		Gold Valley (44)			
Same as Allotment 1.	Existing yearly forage use (perennial): Livestock (cattle) – 594 tons/17,586 acres, approx. 67.5 lb./acre. Burros – 326.7 tons/17,586 acres, approx. 37.2 lb./acre. Wildlife (Bighorn, deer) – 46.07 tons/17,586 acres, approx. 5.24 lb./acre. Current range condition/trend is judged to be good/improving. This is inconsistent with an overall overdraft on available forage of 372 tons and the very high use levels of burros and livestock. Extremely negative impacts will be felt by range and vegetation under current management levels. No data available on previous year's ephemeral production and use.	Overall impact: Highly negative. For potential impact to species, see Balanced Alternative. Wildlife numbers and habitat would decline due to allocation of forage over carrying capacity. Maintaining burro numbers would result in further habitat deterioration and loss of wildlife. Bighorn Sheep would decline 35% and Mule Deer 18%. Riparian areas would deteriorate severely.	Same as Balanced Alternative.	Same as Balanced Alternative.	Operation continues a minimal size for economic viability.
		Horsethief Springs (45)			
Same as Allotment 1.	Existing yearly forage use (perennial): Livestock (cattle) – 1,196.11 tons/108,788 acres, approx. 22 lb./acre. Burros – 297 tons/108,788 acres, approx. 5.46 lb./acre. Wildlife (Bighorn, deer) – 119.8 tons/108,788 acres, approx. 2.2 lb./acre. Wildlife (tortoise) – 6.93 tons/108,788 acres, approx. .13 lb./acre (ephemeral). Current range condition/trend is fair/stable with no overdraft on available forage. No range improvement will occur at these levels of management and declines are possible during drought years. No data on previous year's ephemeral forage production and use.	Overall impact: Highly negative. For potential impact to species, see Balanced Alternative. Range condition would not improve from fair. Bighorn Sheep and Mule Deer would decline 5% or less. Riparian habitat would decline. Tortoises would decline 25% within 5 years.	Same as Balanced Alternative.	Same as Balanced Alternative.	No change.

Table GR-1 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
		Kessler Springs (46)			
Same as Allotment 1.	Existing yearly forage use (perennial): Livestock (cattle) — 3,967.9 tons/253,218 acres, approx. 31.34 lb./acre. Burros — 297 tons/253,218 acres, approx. 2.35 lb./acre. Wildlife (Bighorn, deer) — 141.2 tons/253,218 acres, approx. 1.1 lb./acre. Wildlife (tortoise) — 153 tons/253,218 acres, approx. 1.21 lb./acre (ephemeral). Current range condition/trend is good/improving. This is inconsistent with an overdraft on available forage of 199 tons. Deterioration of range and vegetation will occur at present management levels. No data available on previous year's ephemeral production and use.	Overall impact: Highly negative. For potential impact to species, see Balanced Alternative. Wildlife habitat and numbers would decline due to allocation of forage over carrying capacity. Maintaining burro numbers would result in increased habitat deterioration and loss of wildlife. Riparian habitat would deteriorate. Bighorn Sheep and Mule Deer would decline. Tortoise numbers would decline 60% within 5 years.	Same as Balanced Alternative.	Same as Balanced Alternative.	No significant change.
		Lanfair Valley (47)			
Same as Allotment 1.	Existing yearly forage use (perennial): Livestock — 6,021.7 tons/467,194 acres, approx. 25.8 lb./acre. Burros and wild horses — 1,028 tons/467,194 acres, approx. 4.4 lb./acre. Wildlife (tortoise) — 57.92 tons/467,194 acres, approx. .3 lb./acre. Current range condition/trend is fair — good/improving. An overdraft on available forage of 967.2 tons. Decline in range and vegetation will occur at current use levels. No data available on previous year's ephemeral production and use.	Overall impact: Highly negative. For potential impact to species, see Balanced Alternative. Wildlife habitat and numbers would decline due to the allocation of forage over carrying capacity. Maintaining burro numbers would result in loss of wildlife habitat and numbers. Range condition would decline from fair. Bighorn Sheep would decline 10%, Mule Deer 5%, and tortoise numbers 60% within 5 years.	Same as Balanced Alternative.	Same as Balanced Alternative.	

Table GR-1 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
		Piute Valley (48)			
Same as Allotment 1.	Previous year's ephemeral use: Livestock (cattle, horses) – 89.1 tons/38,278 acres, approx. 4.66 lb./acre. Wildlife (tortoise) – 5.45 tons/38,278 acres, approx. .3 lb./acre. Existing perennial use: Burros – 297 tons/38,278 acres, approx. 15.5 lb./acre. Current range condition/trend is good/stable. This is inconsistent with a 198-ton overdraft on available forage (due primarily to burros). Degradation of range and vegetation will occur at current management levels.	Overall impact: Highly negative. For potential impact to species, see Balanced Alternative. Wildlife habitat and numbers would decline due to over-allocation of forage. Maintaining burro numbers would result in loss of wildlife habitat and numbers. Range condition would not improve. Tortoise numbers would decline 60% within 5 years.	Same as Balanced Alternative.		
		Round Valley (49)			
Same as Allotment 1.	Existing yearly forage use (perennial): Livestock (cattle) – 13.4 tons/4,200 acres, approx. 6.4 lb./acre. Severe degradation of range and vegetation occurs here due to illegal stocking (i.e., trespass), hence its poor and declining rating for range condition/trend. This will continue until tresspass situation is brought under control. No data available on previous year's ephemeral production and use.	Overall impact: Highly negative. For potential impacts to species, see Balanced Alternative. Range condition would continue to decline from current poor rating. Mule Deer, as well as other species, would decline.	Same as Balanced Alternative.		No change.
		Valley View (50)			
Same as Allotment 1.	Existing yearly forage use (perennial): Livestock (cattle) – 4,200.8 tons/289,036 acres, approx. 29.07 lb./acre. Burros – 1,188 tons/289,036 acres, approx. 8.22 lb./acre. Wildlife (Bighorn, deer) – 58.9 tons/289,036 acres, approx. .4 lb./acre. Wildlife (tortoise) – 18.1 tons/289,036 acres, approx. .13 lb./acre (ephemeral). Current range condition/trend is fair/improving. This is inconsistent with a 992-ton overdraft on available forage vegetation and range decline will occur under these management practices. No data available on previous year's ephemeral production.	Overall impact: Highly negative. For potential impacts to species, see Balanced Alternative. Wildlife habitat and numbers would decline due to allocation of forage over carrying capacity. Range condition would not improve from fair. Bighorn Sheep and Mule Deer would decline. Tortoise numbers would decline 35% within 5 years.	Same as Balanced Alternative.	Same as Balanced Alternative.	

Table GR-1 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
		Valley Wells (51)			
Same as Allotment 1.	Existing yearly forage use (perennial): Livestock (cattle) – 2,300.8 tons/243,228 acres, approx. 18.9 lb./acre. Burros – 743 tons/243,228 acres, approx. 6.1 lb./acre. Wildlife (tortoise) – 61.4 tons/243,228 acres, approx. .5 lb./acre (ephemeral). Current range condition/trend is fair/improving. This is inconsistent with a 667.3-ton overdraft on available forage. Management at current use levels will lead to declines in range and vegetation. No data available on previous year's ephemeral production and use.	Overall impact: Highly negative. For potential impacts to species, see Balanced Alternative. Wildlife numbers and habitat would decline due to allocation of forage over carrying capacity. Maintaining burro numbers would result in loss of wildlife habitat and numbers. Range condition would not improve from fair. Tortoise numbers would decline 40% within 5 years.	Same as Balanced Alternative.		
		Ford Dry Lake (52)			
Same as Allotment 1.	Previous year's ephemeral use: Livestock (sheep) – 742.5 tons/19,084 acres, approx. 77.81 lb./acre. Burros – 5.9 tons/19,084 acres, approx. .6 lb./acre. Wildlife (tortoise) – 2.97 tons/19,084 acres, approx. .3 lb./acre. Range condition/trend is good/stable. However the above livestock use is extremely high compared with other ephemeral allotment. Overall impacts to range and vegetation are potentially severe.	Overall impact: Highly negative. For potential impacts to species, see Balanced Alternative. Tortoise numbers would decline 40% within 5 years.	Same as Balanced Alternative.	Same as Balanced Alternative.	
		Jean Lake (53)			
Same as Allotment 1.	Existing yearly forage use (perennial): Livestock (cattle) – 154.4 tons/5,740 acres, approx. 53.8 lb./acre. Wildlife (tortoise) – 3.5 tons/5,740 acres, approx. 1.2 lb./acre. There is no overdraft and range condition/trend is good/stable, however, the above livestock use is high compared to other eph./per. allotments (average use approx. 21.5 lb./acre). As a result, potentially severe impacts on range and vegetation are possible.	Overall impact: Highly negative. For potential impacts to species, see Balanced Alternative. Tortoise numbers would decline 40% within 5 years.	Same as Balanced Alternative.		No change.

Table GR-1 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
Lazy Daisy (54)					
Same as Allotment 1.	Existing yearly forage use (perennial): Livestock (cattle) — 1,188 tons/451,617 acres, approx. 5.26 lb./acre. Burros — 297 tons/451,617 acres, approx. 1.32 lb./acre. Wildlife (Bighorn, deer) — 142.6 tons/451,617 acres, approx. .6 lb./acre. Wildlife (tortoise) — 64.85 tons/451,617 acres, approx. .3 lb./acre (ephemeral). Range condition/trend is good/stable, with a 106.92-ton overdraft on available forage. Although stocking rates are low, the overdraft indicates that the allotment may not be very productive. Therefore, stocking rates probably need to be reduced further to avoid vegetation and range deterioration. No data available on previous year's ephemeral production and use.	Overall impact: Highly negative. For potential impacts to species, see Balanced Alternative. Wildlife habitat and numbers would decline due to allocation of forage over carrying capacity. Maintaining burro numbers would result in loss of wildlife habitat and numbers. Bighorn would decline 65%, Mule Deer 33%, and tortoises 35% within 5 years.	Same as Balanced Alternative.	Same as Balanced Alternative.	
Sheep Driveway (55)					
Same as Allotment 1.	Previous year's ephemeral use: Livestock (sheep) — 49.5 tons/23,040 acres, approx. 4.3 lb./acre. Range condition is fair/stable. No significant impacts on range vegetation. Range condition will not improve, however, at current management levels.	Overall impact: Highly negative. Range condition would not improve from fair.	Same as Balanced Alternative.		No change.

Table GR-2

GRAZING ELEMENT
PROTECTION ALTERNATIVE

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
		Fishlake Valley (1)			
Impacts on soils will be as described for the Balanced Alternative for this and all other allotments under this alternative.	Same as No Action Alternative.	Overall impact: Positive. See Balanced Alternative.	Overall impacts would be low. Potential impacts on: - 640 acres high sensitivity/significance. - 20 cultural sites (estimated).	Same as Balanced Alternative.	No change.
		Bar 99 (2)			
	Same as No Action Alternative.	Overall impact: Positive See Balanced Alternative	Low overall impact. Potential impact on: - 640 acres very high/high cultural significance. - 175 cultural sites (estimated).	Same as Balanced Alternative.	No change.
		Deep Springs (3)			
	Same as Deep Springs, Balanced Alternative.	Overall impact: No substantial impacts. See Balanced Alternative.	Same as Balanced Alternative except that impacts may be slightly less severe.	Same as Balanced Alternative.	Small reduction in operator's total forage supply.
		Last Chance (4)			
	Same as Deep Springs, Balanced Alternative.	Overall impact: No substantial impacts. See Balanced Alternative.	Same as Balanced Alternative except that trampling may be reduced.	Same as Balanced Alternative.	33% AUM reduction in a moderate reduction for the total operation.
		Oasis (5)			
		Overall impact: Positive. See Balanced Alternative.			
		South Oasis (6)			
	Same as Deep Springs, Balanced Alternative.	Overall impact: No substantial impacts. Reproductive success of some species would be affected by spring grazing. The slight reduction in overall wild horse and burro numbers would not improve wildlife habitat.	Same as Balanced Alternative except slightly less severe.		Would be reduced to a marginal size operation.

Table GR-2 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
		Darwin (7)			
	Same as Darwin, Balanced Alternative.	Overall impact: No substantial impacts. See Balanced Alternative.	Same as Balanced Alternative except slightly greater concentration of impacts due to fence construction.	Same as Balanced Alternative.	No significant change.
		Hunter Mt. (8)			
	Same as Deep Springs, Balanced Alternative.	Overall impact: No substantial impacts. See Balanced Alternative.	Low impacts. See Balanced Alternative for list of resources which might be impacted.	Same as Balanced Alternative.	Probably not operable.
		Lacey-Cactus-McCloud (9)			
	Same as Deep Springs, Balanced Alternative.	Overall impact: Highly negative. See Balanced Alternative.	See Balanced Alternative.	Same as Balanced Alternative.	No significant impact.
		Olancha Common (10)			
	Same as Olancha Common, Balanced Alternative.	Overall impact: Positive. See Balanced Alternative.	See Balanced Alternative.	Same as Balanced Alternative.	No change.
		Tunawee (11)			
	Increase in both burro and livestock use, from 45.1 lb./acre and 9.7 lb./acre, in No Action Alternative, to 48.5 lb./acre and 10.8 lb./acre, respectively. Therefore, impacts on range and vegetation will be more severe than those in the No Action Alternative.	Overall impact: Negative. For potential impacts to species, see Balanced Alternative. Increasing burro numbers would increase habitat deterioration. Spring grazing would affect reproductive success of some species. Livestock concentration at proposed water developments would result in habitat deterioration at these sites. Construction of pipeline would temporarily disrupt wildlife habitat. Range would probably not improve from a current fair condition.	Similar to Balanced Alternative except that impacts may be greater due to amount of range improvements.	Same as Balanced Alternative.	No significant change.

Table GR-2 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
Antelope Valley (12)					
	Since this is an ephemeral allotment, no projection of utilization is available. Ephemeral productivity on these allotments may range from less than 100 to over 600 lb./acre, depending upon the amount of the year's rainfall. Management prescriptions for forage use should minimize impact on vegetation. Overall impact on range and vegetation relative to present condition would be positive. A 200 lb./acre limit on available standing crop plus a 25% maximum utilization limit on forage could eventually have the affect of favoring shrubs over annual plants and may cause an eventual shift in the vegetation aspect toward more shrubs at the expense of annuals.	Overall impact: Highly negative. See Balanced Alternative.	See Balanced Alternative.		No change.
Bissel (13)					
	Same as Antelope Valley.	Overall impact: Highly negative. See Balanced Alternative.	See Balanced Alternative.		Turnout date would be delayed 2-3 weeks in most years.
Cantil Common (14)					
	Same as Antelope Valley ephemeral.	Overall impact: No substantial impact. See Balanced Alternative. Tortoise numbers may stabilize or stabilize after declining.	See Balanced Alternative.	Same as Balanced Alternative.	Turnout date would be delayed 2-3 weeks in most years. Livestock forage consumption reduced by about 20%.
Monolith-Cantil (15)					
	Same as Antelope Valley.	Overall impact: Positive. For potential impacts to species, see Balanced Alternative. Reproductive success of some species would be affected by spring grazing. Tortoise numbers may stabilize or rate of decline may be reduced.	See Balanced Alternative.	Same as Balanced Alternative.	Turnout date would be delayed 2-3 weeks in most years. Livestock forage consumption reduced by about 40%.
Oak Creek (16)					
	Same as Oak Creek, Balanced Alternative.	Overall impact: Highly negative. See Balanced Alternative.	See Balanced Alternative.		No change.

Table GR-2 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
Rudnick Common (17)					
	Same as Rudnick, Balanced Alternative.	Overall impact: Highly negative. See Balanced Alternative.	Same as Balanced Alternative except that impacts may be somewhat less severe.	Same as Balanced Alternative.	Moderate reduction in stocking. Major reduction in loan value of permit.
Warren (18)					
	Same as Warren, Balanced Alternative.	Overall impact: Highly negative. See Balanced Alternative.	See Balanced Alternative.		No change.
Walker Pass (19)					
	Not substantially different from Balanced and No Action Alternatives. Livestock use down to 57.6 lb./acre from 69.3 lb./acre in No Action Alternative.	Overall impact: Negative. See Balanced Alternative.	Same as Balanced Alternative except that overall trampling will be reduced. However, well development may concentrate impacts.	Same as Balanced Alternative.	No significant impact.
Pahrump Valley (20)					
	Same as Pahrump Valley, Balanced Alternative.	Overall impact: No substantial impact. See Balanced Alternative.	See Balanced Alternative.		No significant change.
Hansen (21)					
	Same as Antelope Valley.	Overall impact: Positive. See Balanced Alternative.	Same as Balanced Alternative. Overall impacts would be low.	Same as Balanced Alternative.	No significant change.
Boron Sheep (22)					
	Same as Antelope Valley.	Overall impact: Negative. See Balanced Alternative.	See Balanced Alternative.	Same as Balanced Alternative.	Livestock forage reduced by about 67% in poor years. Turnout date would be delayed 2-3 weeks in most years.
Buckhorn Canyon (23)					
	Same as Antelope Valley.	Overall impact: No substantial impact. For potential impacts to species, see Balanced Alternative. Spring grazing may affect reproductive success of some species. Tortoise numbers would stabilize in some areas and decline rate be reduced in other areas.	See Balanced Alternative.	Same as Balanced Alternative.	Livestock forage reduced by about 25%. Turnout date would be delayed by 2-3 weeks in most years.
Goldstone (24)					
	Same as Antelope Valley.	Overall impact: Negative. See Balanced Alternative.	See Balanced Alternative.		Turnout date would be delayed by 2-3 weeks in most years.

Table GR-2 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
Granite Mtns. (25)					
	Same as Antelope Valley.	Overall impacts: No substantial impact. See Balanced Alternative.	See Balanced Alternative.	Same as Balanced Alternative.	Turnout date would be delayed 2-3 weeks in most years.
Gravel Hills (26)					
	Same as Antelope Valley.	Overall impact: Positive. See Balanced Alternative.	See Balanced Alternative.	Same as Balanced Alternative.	Livestock forage reduced by about 30%. Turnout date would be delayed 2-3 weeks in most years.
Harper Lake (27)					
	Same as Harper Lake Balanced Alternative	Overall impact: Positive. For potential impacts to species, see Balanced Alternative. Livestock concentrations at proposed water development would result in localized habitat deterioration. Construction of fences would temporarily disrupt wildlife habitat. Tortoise numbers would stabilize in most of the allotment. Some areas would continue to decline or decline at a reduced rate.	Same as Balanced Alternative except that impacts will be somewhat less severe.	Same as Balanced Alternative.	Allotment would be given a preference right AUM base. Additional authorization based on ephemeral forage growth would occur up to 30 days later than at present.
Lava Mts. (28)					
	Same as Antelope Valley.	Overall impact: Positive. See Balanced Alternative.	All livestock-related impacts would be eliminated.	Same as Balanced Alternative.	Turnout date would be delayed by 2-3 weeks in most years.
Pilot Knob (29)					
	Same as Antelope Valley.	Overall impact: Negative. See Balanced Alternative.	See Balanced Alternative.		Turnout date would be delayed by 2-3 weeks in most cases.
Shadow Mt. (30)					
	Same as Antelope Valley.	Overall impact: Negative. See Balanced Alternative.	See Balanced Alternative.		Livestock forage reduced by 15%. Turnout date would be delayed by 2-3 weeks in most years.
Spangler Hills (31)					
	Same as Antelope Valley.	Overall impact: Positive. See Balanced Alternative.	See Balanced Alternative.	Same as Balanced Alternative.	Turnout date would be delayed 2-3 weeks in most years.
Stoddard Valley (32)					
	Same as Antelope Valley.	Overall impact: No substantial impact. For potential impacts to species, see Balanced Alternative. Tortoise numbers would stabilize after declining or decline would be reduced. (cont.)	See Balanced Alternative.	Same as Balanced Alternative.	Livestock forage would be reduced by about 25%. Turnout would be delayed by 2-3 weeks in most years.

Table GR-2 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
		Stoddard Valley (32) (cont.)			
		Reproductive success of some species would be affected by spring grazing. Livestock concentration at proposed water developments would result in localized habitat deterioration.			
		Superior Valley (33)			
	Same as Antelope Valley.	Overall impact: No substantial impact. For potential impacts to species, see Balanced Alternative. Tortoise numbers would decline at a reduced rate or stabilize after declining in most of the allotment. Some areas would decline. Reproductive success of some species may be affected by spring grazing. Livestock concentration at proposed water developments would result in localized habitat deterioration.	Same as Balanced Alternative except slightly more trampling.	Same as Balanced Alternative.	Livestock forage would be reduced by 20%. Turnout date would be delayed by 2-3 weeks in most years.
		Valley Well (34)			
	Same as Balanced Alternative.	Overall impact: No substantial impact. See Balanced Alternative.	See Balanced Alternative.	Same as Balanced Alternative.	No change.
		Newberry-Ord (35)			
	Virtually identical to Balanced Alternative.	Overall impact: No substantial impact. See Balanced Alternative.	See Balanced Alternative.	Same as Balanced Alternative.	Allotment would be given a preferred right AUM base. Additional authorizations based on ephemeral forage growth would occur up to 30 days later than present.
		Rattlesnake Canyon (36)			
	Same as Balanced Alternative.	Overall impact: Positive. See Balanced Alternative.	Same as Balanced Alternative except that impacts would be less severe.	Same as Balanced Alternative.	No significant change.
		Whitewater Canyon (37)			
	Same as Balanced Alternative.	Overall impact: Highly positive. See Balanced Alternative.	See Balanced Alternative.		No significant change.
		Afton Canyon (38)			
	Same as Antelope Valley.	Overall impact: No substantial impact. For potential impacts on species, see Balanced Alternative. Livestock concentration at proposed water developments would result in localized habitat deterioration. Construction of fences would temporarily disrupt wildlife habitat.	Range improvements will concentrate trampling and disturb sites.	Same as Balanced Alternative.	Turnout date would be delayed 2-3 weeks in most years.

Table GR-2 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
		Afton Canyon (38) (cont.)			
		Fences could potentially restrict movement of Bighorn Sheep or cause injuries. Competition between livestock and Bighorn would be reduced and Bighorn numbers may stabilize or improve.			
		Clark Mt. (39)			
	Same as Deep Springs, Balanced Alternative.	Overall impact: No substantial impact. For potential impacts on species, see Balanced Alternative. Rate of decline in tortoise numbers would be reduced. See Balanced Alternative for other impacts.	See Balanced Alternative.	Same as Balanced Alternative.	Herd would be reduced by 50%. Additional ephemeral use may be authorized in some years, but additional stock would be turned out 30 days later than at present.
		Colton Hills (40)			
	Same as Deep Springs, Balanced Alternative.	Overall impact: Positive. For potential impacts on species, see Balanced Alternative. Rate of decline in tortoise numbers would be reduced in most areas. Some areas would stabilize after declining. Bighorn would remain stable or increase. See Blanaced Alternative for other impacts.	Same as Balanced Alternative except for slightly less intense impacts.	Same as Balanced Alternative.	Cow-calf operation reduced by about 50%. Additional ephemeral forage may be authorized in some years, making operator more dependent upon stockers. However, stockers may be uneconomical due to 30-day delay in turnout date.
		Crescent Peak (41)			
	Same as Crescent Peak, Balanced Alternative.	Overall impact: Highly positive. See Balanced Alternative.	Same as Balanced Alternative except that impacts would be slightly less severe.	Same as Balanced Alternative.	No significant change.
		Cronese Lake (42)			
	Same as Antelope Valley.	Overall impact: No substantial impact. For potential impacts to species, see Balanced Alternative.	Same as Balanced Alternative except that impacts would be slightly less severe.	Same as Balanced Alternative.	Turnout date would be delayed 2-3 weeks in most years.
		Granite Mt. (43)			
	Same as Deep Springs, Balanced Alternative.	Overall impact: Negative. See Balanced Alternative.	Same as Balanced Alternative except that spring development could impact stratified site deposits.	Same as Balanced Alternative.	Not economical as a yearlong operation. Could be operated only with stockers.
		Gold Valley (44)			
	Virtually the same as Gold Valley, Balanced Alternative.	Overall impact: Highly positive. See Balanced Alternative.	Same as Balanced Alternative except that impacts would be slightly less severe.	Same as Balanced Alternative.	Ranch would be economically marginal.

Table GR-2 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
		Horsethief Springs (45)			
	Virtually the same as Horsethief Springs, Balanced Alternative.	Overall impact: Negative. For potential impacts on species, see Balanced Alternative. Rate of decline of tortoise numbers would be reduced. See Balanced Alternative for other impacts.	Same as Balanced Alternative except that impacts would be slightly more severe.	Same as Balanced Alternative.	No change.
		Kessler Springs (46)			
	Livestock and burro use down from No Action Alternative, and about the same level of magnitude as in the Balanced Alternative.	Overall impact: Positive. For potential impacts on species, see Balanced Alternative. Increase in current burro numbers would result in loss of wildlife habitat and numbers. See Balanced Alternative for other impacts.	Same as Balanced Alternative except that impacts would be slightly less severe.	Same as Balanced Alternative.	No significant change.
		Lanfair Valley (47)			
	See Deep Springs, Balanced Alternative.	Overall impact: No substantial impacts. For potential impacts on species, see Balanced Alternative. The rate of decline in tortoise numbers would be reduced in most areas. In some areas the numbers would stabilize after declining. See Balanced Alternative for other impacts.	Same as Balanced Alternative except that impacts would be slightly less severe.	Same as Balanced Alternative.	Cow-calf operation would be reduced below the operator's stated minimum economic size. Operation would be dependent upon yearly ephemeral authorizations. 30-day delay in turnout on ephemerals when authorized.
		Piute Valley (48)			
	See Antelope Valley.	Overall impact: Positive. See Balanced Alternative.	Same as Balanced Alternative except that impacts would be slightly less severe.		Turnout date delayed by 30 days.
		Round Valley (49)			
	Same as Round Valley, Balanced Alternative.	Overall impacts: Highly negative. See Balanced Alternative.	See Balanced Alternative.		No change.

Table GR-2 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
Valley View (50)					
	Livestock use is reduced as compared to Balanced Alternative, but burro use is increased. Overall impacts are similar to Valley View, Balanced Alternative.	Overall impact: Positive. For potential impacts on species, see Balanced Alternative. Although reducing burro numbers would improve the existing conditions, burros would still be at a level incompatible with sensitive wildlife resources. Concentrations of livestock at numerous proposed water developments would result in localized habitat deterioration. Construction of pipeline would temporarily disrupt wildlife habitat. Bighorn Sheep would remain stable. Rate of decline in tortoise numbers would be reduced.	Same as Balanced Alternative except that impacts would be slightly less severe.	Same as Balanced Alternative.	2-3 week delay in turnout date on ephemeral range when authorized.
Valley Wells (51)					
	Livestock use is reduced as compared to the Balanced Alternative, but burro use is increased. Overall impacts are similar to Valley Wells, Balanced Alternative.	Overall impact: Positive. For potential impacts on species, see Balanced Alternative. Reducing burro numbers would improve existing conditions, but numbers would still be at a level incompatible with sensitive wildlife resources. Concentration of livestock at numerous proposed water developments would result in localized habitat deterioration. Construction of pipeline would temporarily disrupt wildlife habitat. Rate of decline would be reduced for tortoise populations.	Same as Balanced Alternative except that impacts would be slightly less severe.		Up to 30 days delay in turnout date on ephemeral range.
Ford Dry Lake (52)					
	Same as Antelope Valley.	Overall impact: Positive. For potential impact on species, see Balanced Alternative. Livestock concentration at proposed water developments would result in localized habitat deterioration. Spring grazing would affect reproductive success of some species. Rate of decline of tortoise numbers would be reduced.	See Balanced Alternative.	Same as Balanced Alternative.	2-3 week delay in turnout date.
Jean Lake (53)					
	Same as Jean Lake, Balanced Alternative.	Overall impact: Positive. See Balanced Alternative.	See Balanced Alternative.		No change.

Table GR-2 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
		Lazy Daisy (54)			
	Livestock use is not reduced substantially from No Action Alternative. Burros are reduced, but not to the extent that they are in the Balanced Alternative. Overall impacts are similar to Lazy Daisy, Balanced Alternative.	Overall impact: Positive. Rate of decline of tortoise numbers would be reduced in most areas. Numbers in some areas would stabilize after declining. See Balanced Alternative for other impacts.	Same as Balanced Alternative except that impacts would be slightly less severe.	Same as Balanced Alternative.	30-day delay in turnout date on ephemeral range covering 35% of the allotment.
		Sheep Driveway (55)			
	Same as Antelope Valley.	Overall impact: Highly negative. See Balanced Alternative.	See Balanced Alternative.		No change.
		Tecopa (56)			
	Same as Antelope Valley.	Overall impact: Negative. A number of unique and sensitive wildlife species and habitats, including Federal and State-listed species, would be extremely susceptible to disturbance by grazing. Range condition is only fair and would not improve by adding grazing.	Same as Balanced Alternative except that impacts would be slightly less severe.		Use to be determined yearly.
		Rattlesnake Canyon Annex (57)			
	Same as Rattlesnake Canyon Annex, Balanced Alternative.	Overall impact: Negative. See Balanced Alternative for impacts on species.	Same as Balanced Alternative except that impacts would be slightly less severe.		Would make the ranch a principal source of income.
		Johnson Valley (58)			
	Same as Antelope Valley.	Overall impact: Highly negative. See Balanced Alternative	See Balanced Alternative.		Use to be determined yearly.
		Ludlow (59)			
	Same as Antelope Valley.	Overall impact: Negative. See Balanced Alternative.	Same as Balanced Alternative except that impacts would be slightly less severe.		Use to be determined yearly.
		Round Mt. (60)			
	Same as Round Mountain, Balanced Alternative.	Overall impact: Negative. See Balanced Alternative.	See Balanced Alternative.	Same as Balanced Alternative.	Would make a submarginal livestock operation.
		Chemehuevi (61)			
	Same as Chemehuevi, Balanced Alternative.	Overall impact: Highly negative. See Balanced Alternative.	See Balanced Alternative.	Same as Balanced Alternative.	Use would be determined yearly. Critical habitat restrictions might make it uneconomical to operate.
		Rice Valley (62)			
	Same as Antelope Valley.	Overall impact: Negative. See Balanced Alternative.	See Balanced Alternative.		Use would be determined yearly.

Table GR-2 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
Palen (63)					
	Same as Antelope Valley.	Overall impact: Negative. See Balanced Alternative.	See Balanced Alternative.	Same as Balanced Alternative.	Use would be determined yearly.
Ford Dry Lake Annex (64)					
	Same as Balanced Alternative.	Overall impact: Highly negative See Balanced Alternative.	Same as Balanced Alternative except that impacts would be slightly less severe.	Same as Balanced Alternative.	Use would be determined yearly.
Homewood Canyon (65)					
	Same as Balanced Alternative.	Overall impact: Highly negative. See Balanced Alternative.	See Balanced Alternative.		Use would be determined yearly.
Death Valley (66)					
	Same as Balanced Alternative.	Overall impact: Negative. See Balanced Alternative.	Same as Balanced Alternative except that impacts would be slightly less severe.		Would make a submarginal operation.
Lathrop Well (67)					
	Same as Balanced Alternative.	Overall impact: Negative. See Balanced Alternative.	See Balanced Alternative.		Would make a submarginal operation.
Granite Mtn. Annex (68)					
	Same as Antelope Valley.	Overall impact: Highly negative. See Balanced Alternative.	Same as Balanced Alternative except that impacts would be slightly less severe.	Same as Balanced Alternative.	Livestock use would be determined yearly.

Table GR-3

GRAZING ELEMENT
PROTECTION ALTERNATIVE (NO GRAZING)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
		Fishlake Valley (1)			
Proposed allotments are currently not grazed and would only be grazed under the Protection, Balanced, and Use Alternatives. Therefore, a discussion of impacts under No Grazing is not relevant here.	25.74 tons (D.W.) of forage available for reallocation to wildlife and nonconsumptive use over 1,482 acres. Range condition should improve to "excellent" within 20 years. Overall impacts on vegetation are highly positive from the standpoint of a large available standing crop continually present. The magnitude would of course fluctuate from year to year with climatic changes. Eventual changes, which are difficult to predict, would take place with regard to vegetation composition. However, in the long run, based on other southwestern ranges, perennial grasses would probably increase at the expense of shrubs and annual plants. As a result of the high standing crop, the possibility of range fires increases.	Overall impact: Highly positive. Wildlife habitat would improve.	Refer to Balanced Alternative for Cultural Resources. Elimination of grazing would result in mildly positive impacts.		The No Grazing Alternative would have a severe impact on livestock operations in all allotments. Cattle operations would be nonexistent and sheep operations vastly curtailed.
		Bar 99 (2)			
	152 tons (D.W.) of forage available for reallocation over 13,671 acres. Same comments as Fishlake Valley.	Overall impact: Highly positive. Wildlife habitat would improve.	Elimination of grazing would result in moderately positive impacts upon cultural resources, providing nonutilized AUMs are not given to burros.		
		Deep Springs (3)			
	28.8 tons (D.W.) of forage available for reallocation to wildlife. See Fishlake Valley.	Overall impact: Positive. The current fair condition of the range would improve. Sensitive riparian areas, including State-listed Rare Black Toad habitat, would improve. However, burro numbers would be maintained at levels incompatible with sensitive wildlife resources.	Elimination of grazing would result in moderately positive impacts upon cultural resources, providing burro populations remain the same.	Potential improvement in opportunities and experiences for birding and viewing floral displays.	
		Last Chance (4)			
	1,617.17 tons of forage (D.W.) available for reallocation over 43,028 acres. See Fishlake Valley.	Overall impact: Positive.		Potential improvement in hunting opportunities and experiences for Deer and Chukar.	

Table GR-3 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
		The current fair condition of the range would improve. Competition between Bighorn Sheep and cattle at critical water sources would be eliminated and Bighorn numbers would increase. Burro numbers would be maintained at a level incompatible with sensitive wildlife resources.	Elimination of grazing would result in highly positive impacts upon cultural resources, providing non-utilized AUMs are not given to burros. Positive impacts would be greatest at surface sites (as opposed to bedrock features).		
Oasis Ranch (5)					
	324.7 tons (D.W.) of forage available over 22,894 acres. See Fishlake Valley.	Overall impact: Highly positive. Wildlife habitat would improve. Sensitive riparian areas, such as Cottonwood Creek, would improve.	Elimination of grazing would have moderately positive impacts upon cultural resources, providing burro populations do not exceed current levels.	Potential improvement in opportunities and experiences for birding and viewing floral displays.	
South Oasis (6)					
	236.12 tons (D.W.) of forage available over 10,884 acres. See Fishlake Valley.	Overall impact: Positive. The current fair condition of the range would improve. Wild horse and burro numbers would be maintained at levels incompatible with wildlife resources.	Elimination of grazing would have moderately positive impacts upon cultural resources, providing burro populations do not exceed current levels.		
Darwin (7)					
	21.3 tons (D.W.) of forage available for reallocation over 1,928 acres. See Fishlake Valley.	Overall impact: Highly positive. The current fair condition of the range would improve.	Elimination of grazing (horses) would result in mildly positive impacts upon cultural resources, providing burro populations do not exceed current levels.	Potential improvement in interpretive opportunities and experiences.	
Hunter Mt. (8)					
	546.9 tons (D.W.) of forage available for reallocation over 55,210 acres. See Fishlake Valley.	Overall impact: Positive. The current fair condition of the range may improve. However, burro numbers would be maintained at high levels incompatible with the many sensitive wildlife resources present.	Elimination of grazing (cattle) would result in moderately positive impacts, providing burro and wild horse populations do not exceed current levels.	Potential improvement in hunting opportunities and experiences.	

Table GR-3 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
Lacey-Cactus-McCloud (9)					
	2,412.1 tons (D.W.) of forage available over 418,650 acres. See Fishlake Valley.	Overall impact: Positive. The current fair and declining trend of the range would improve. Burro and wild horse numbers would be maintained at high levels incompatible with sensitive wildlife resources.	Elimination of grazing (cattle) would result in highly positive impacts, providing burro and wild horse populations do not exceed current levels. Positive impacts would be greatest at surface sites (lithic scatters, temporary camps, etc.).	Potential improvement in opportunities and experiences for hunting and interpretation.	
Olancha Common (10)					
	372.2 tons (D.W.) of forage available for reallocation over 14,540 acres. Same as Fishlake Valley.	Overall impact: Highly positive. Wildlife habitat would improve.	Elimination of grazing (cattle) would have highly positive impacts, especially with burros and wild horses excluded from area.		
Tunawee Common (11)					
	967.2 tons of forage (D.W.) available for reallocation over 42,880 acres. Same comments as Fishlake Valley.	Overall impact: Positive. The current fair condition of the range may improve. Burro numbers would be maintained at a high level incompatible with sensitive wildlife resources.	Elimination of grazing (sheep/cattle) would have moderately positive impacts, providing burro and wild horse populations do not exceed current levels.	Potential improvement in opportunities and experiences for hunting, birding, and viewing floral displays.	
Antelope Valley (12)					
	No absolute figures on future ephemeral forage availability are available. Depending on the amount of rainfall, less than 100 to more than 600 lb./acre (D.W.) of ephemeral forage can be produced in this type of allotment. In Antelope Valley this would amount to anywhere from less than 325 tons to more than 1,950 tons throughout the entire allotment. In 1978, 160.9 tons of ephemeral forage were utilized in this allotment. This figure represents about 8% utilization on 1,950 tons and 50% on 325 tons. Freed from grazing impacts most southwestern ephemeral range lands tend to change from their ephemeral character (at least in part) to one which contains a relatively greater proportion of shrubs, and then to mixed shrub and perennial grasses. In addition, the fire cycle would change since a large fuel-loading of shrubs together with perennial grasses makes conditions more	Overall impact: Highly positive. Condition of the habitat would improve significantly.	Elimination of grazing (sheep) would have mildly positive impacts.		

Table GR-3 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
		favorable for fires in those areas of allotments which can potentially support perennial grasses. Whether or not these scenarios constitute a positive impact is a value judgment based upon a "point of view." From a standpoint of "pristineness" it would be judged positive.			
Bissel (13)					
	Same comments as Antelope Valley.	Overall impact: Highly positive. The current fair condition of the range would improve significantly. Tortoise numbers would stabilize or improve.	Elimination of grazing (sheep) would have mildly positive impacts.		
Cantil Common (14)					
	Same comments as Antelope Valley.	Overall impact: Highly positive. The current fair condition of the range would improve significantly. The declining trend in tortoise numbers would be stabilized.	Elimination of grazing (sheep) would have highly positive impacts, especially with burros and wild horses excluded from area.	Potential improvement in opportunities and experiences for hunting, birding, interpretation, off-road-vehicle free play, and viewing floral displays.	
Monolith-Cantil (15)					
	742.5 tons of perennial forage would be available for reallocation to nonconsumptive use. See Fishlake Valley.	Overall impact: Highly positive. Habitat condition would improve, and tortoise numbers would stabilize.	Elimination of grazing (sheep) would have moderately positive impacts, especially upon surface sites.	Potential improvement in opportunities and experiences for birding and viewing floral displays.	
Oak Creek (16)					
	7.92 tons of perennial forage would be available for reallocation to nonconsumptive use. See Fishlake Valley.	Overall impact: Highly positive. The current fair condition of the range would improve significantly.	Elimination of grazing (cattle) would have mildly positive impacts.		

Table GR-3 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
		Rudnick Common (17)			
	12,974 tons of perennial forage available for reallocation. See Fishlake Valley.	Overall impact: Highly positive. The current fair and declining condition of the range would improve significantly. The many sensitive wildlife habitats and associated species would improve significantly.	Elimination of grazing (cattle) would have highly positive impacts, especially upon surface sites and accessible rockshelters.	Potential improvement in opportunities and experiences for birding, hunting, interpretive, off-road-vehicle free play, and viewing floral displays.	
		Warren (18)			
	27.2 tons of forage available for reallocation. See Fishlake Valley.	Overall impact: Highly positive. The current fair condition of the range would improve.	Elimination of grazing (sheep) would have mildly positive impacts.		
		Walker Pass (19)			
	2,598.8 tons of forage available for reallocation. See Fishlake Valley.	Overall impact: Highly positive. The current fair condition of the range would improve significantly.	Elimination of grazing (cattle) would result in highly positive impacts, especially upon surface sites. No burros or wild horses in area.	Potential improvement in opportunities and experiences for birding and viewing floral displays.	
		Pahrump Valley (20)			
	272.3 tons of forage available for reallocation. See Fishlake Valley.	Overall impact: Highly positive. The current fair condition of the range would improve. The declining trend in tortoise populations would stabilize. Bighorn Sheep in the Mopah Mts may return in portions of their range, lost historically due to cattle use.	Elimination of grazing (cattle) would have moderately positive impacts.		
		Hansen (21)			
	690.5 tons of forage available for reallocation. See Fishlake Valley.	Overall impact: Highly positive. General habitat condition would improve.	Elimination of grazing (sheep/cattle) would have moderately positive impacts.	Potential improvement in opportunities and experiences for hunting, birding, and viewing floral displays.	

Table GR-3 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
Boron Sheep (22)					
	See Antelope Valley.	Overall impact: Highly positive. Wildlife habitat condition would improve. The declining trend in tortoise populations would stabilize.	Elimination of grazing (sheep) would have mildly positive impacts.	Potential improvement in opportunities and experiences for interpretation, birding, and viewing floral displays.	
Buckhorn Canyon (23)					
	See Antelope Valley.	Overall impact: Highly positive. The current fair condition of the range would improve. Riparian habitat and associated species would improve. Declining trends in tortoise population would stabilize.	Elimination of grazing (sheep) would have moderately positive impacts.	Potential improvement in opportunities and experiences for hunting.	
Goldstone (24)					
	See Antelope Valley.	Overall impact: Highly positive. Wildlife habitat would improve. Declining trend in tortoise populations would stabilize.	Elimination of grazing (sheep) would have mildly positive impacts.		
Granite Mtns. (25)					
	See Antelope Valley.	Overall impact: Highly positive. Wildlife habitat would improve.	Elimination of grazing would have no significant impacts.	Potential improvement in opportunities and experiences for hunting.	
Gravel Hills (26)					
	See Antelope Valley.	Overall impact: Highly positive. Wildlife habitat would improve. Declining trends in tortoise populations would stabilize.	Elimination of grazing (sheep) would have moderately positive impacts.	Potential improvement in opportunities and experiences for hunting, birding, and viewing floral displays.	
Harper Lake (27)					
	495 tons of perennial forage available for reallocation. See Fishlake Valley.	Overall impact: Highly positive. Wildlife habitat would improve. The declining trend in tortoise populations may stabilize.	Elimination of grazing (cattle) would have strongly positive impacts. This is especially true since the primal body of surface prehistoric sites is quite sensitive to disturbance.	Potential improvement in opportunities and experiences for birding, hunting, and viewing floral displays.	

Table GR-3 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
		Lava Mts. (28)			
	See Antelope Valley.	Overall impact: Highly positive. Decline in tortoise populations may stabilize.	Elimination of grazing (sheep) would have moderately positive impacts, particularly at surface lithic sites and easily accessible rockshelters.	Potential improvement in opportunities and experiences for birding, hunting, interpretation, and viewing floral displays.	
		Pilot Knob (29)			
	See Antelope Valley.	Overall impact: Highly positive. Wildlife habitat would improve. Declining trends in tortoise numbers may stabilize.	Elimination of grazing (cattle) would have strongly positive local impacts and mildly positive overall impacts. Positive impacts are projected under the assumption that feral burros do not exceed current population levels.		
		Shadow Mts. (30)			
	See Antelope Valley.	Overall impact: Highly positive. The fair and declining condition of the range would improve significantly. The declining trend in tortoise populations would stabilize.	Elimination of grazing (sheep) would have mildly positive impacts.		
		Spangler Hills (31)			
	See Antelope Valley.	Overall impact: Highly positive. Wildlife habitat would improve. The declining trend in tortoise population may stabilize or be reduced.	Elimination of grazing (sheep) would have moderately positive impacts overall. This especially is true for a number of sensitive surface sites (including one of known National Register quality).	Potential improvement in opportunities and experiences for birding, hunting, interpretation, and viewing floral displays.	
		Stoddard Mt. (32)			
	See Antelope Valley.	Overall impact: Highly positive. Wildlife habitat would improve. The declining trend in tortoise population may stabilize or be reduced.	Elimination of grazing would result in highly positive impacts, especially upon surface sites which could be trampled by sheep.	Potential improvement in opportunities and experiences for hunting, interpretation, birding, and viewing floral displays.	

Table GR-3 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
		Superior Valley (33)			
	See Antelope Valley.	Overall impact: Highly positive. Wildlife habitat would improve. The declining trend in tortoise populations may stabilize or be reduced.	Elimination of grazing (sheep) would have highly positive impacts.	Potential improvement in opportunities and experiences for hunting, interpretation, birding, and viewing floral displays.	
		Valley Well (34)			
	11.9 tons of forage available for reallocation. See Fishlake Valley.	Overall impact: Highly positive. The fair, declining condition of the range would improve significantly.	Elimination of grazing (cattle) would have no significant impact.	Potential improvement in opportunities and experiences for hunting and interpretation.	
		Newberry Ord (35)			
	917.7 tons of perennial forage available for reallocation. See Fishlake Valley.	Overall impact: Positive. The fair condition of the range would improve. The declining trend of tortoise populations may stabilize or be reduced. Burro numbers would continue to degrade habitat.	Elimination of grazing (cattle) would have moderately positive impacts.	Potential improvement in opportunities and experiences for hunting, interpretation, birding, and viewing floral displays.	
		Rattlesnake Canyon (36)			
	516.8 tons of perennial forage available for reallocation. See Fishlake Valley.	Overall impact: Highly positive. Wildlife habitat would improve. Potential for reintroduction of Desert Bighorn Sheep into the Bighorn Mts. would be greatly enhanced. Declining trends in tortoise numbers may stabilize or be reduced.	Elimination of grazing (cattle) would have moderately positive impacts.	Potential improvement in opportunities and experiences for interpretation.	
		Whitewater Canyon (37)			
	380.2 tons of ephemeral forage available for reallocation. See Fishlake Valley.	Overall impact: Positive. Wildlife habitat would improve. However, burro numbers would continue to degrade habitat.	Elimination of grazing (cattle) would have moderately positive impacts, providing burro populations remain at current levels.		

Table GR-3 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
		Afton Canyon (38)			
	See Antelope Valley	Overall impact: Highly positive. The current fair condition of the range would improve. Sensitive riparian habitat would improve. Competition between Bighorn and livestock at water sources would be reduced.	Elimination of grazing will result in mildly positive impacts overall. Extensive lithic sites in the north will receive strongly positive impacts.	Potential improvement in opportunities and experiences for hunting, birding, interpretation, and viewing floral displays.	
		Clark Mt. (39)			
	926.6 tons of perennial forage available for reallocation. See Fishlake Valley.	Overall impact: Positive. The current fair condition of the range would improve. Declining trends in tortoise populations would stabilize or improve. Competition between Bighorn and cattle at water sources would be eliminated. Burro numbers would be maintained at a level incompatible with the high number of sensitive wildlife.	Elimination of grazing (cattle) would result in moderately positive impacts, providing burro populations remain at current levels.	Potential improvements in opportunities and experiences for interpretation and hunting.	
		Colton Hills (40)			
	1,424 tons of perennial forage available for reallocation. See Fishlake Valley.	Overall impact: Positive. The current fair condition of the range would improve. Declining trends in tortoise numbers would stabilize. Competition between Bighorn and cattle would be eliminated. Burro numbers would be maintained at a level incompatible with the high number of sensitive wildlife resources.	Elimination of grazing (cattle) would result in moderately positive impacts, providing burro populations remain at current levels.	Potential improvement in opportunities and experiences for interpretation and viewing floral displays.	
		Crescent Peak (41)			
	772.2 tons of perennial forage available for reallocation. See Fishlake Valley.	Overall impact: Highly positive. Wildlife habitat would improve. The declining trend in tortoise populations would stabilize. Competition between Bighorn and livestock would be eliminated.	Elimination of grazing (cattle) would result in moderately positive impacts, especially upon surface sites (villages, temporary camps, lithics).	Potential improvement in opportunities and experiences for hunting and viewing floral displays.	

Table GR-3 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
		Cronese Lake (42)			
	See Antelope Valley.	Overall impact: Highly positive. The current fair condition of the range would improve.	Elimination of grazing (cattle) would have moderately positive impacts.	Potential improvement in opportunities and experiences for interpretation.	
		Granite Mt. (43)			
	2,334.4 tons of forage available for reallocation. See Fishlake Valley.	Overall impact: Positive. The current poor condition of the range may improve. Competition between Bighorn and cattle would be eliminated. Burro numbers would be at a level incompatible with the high number of sensitive wildlife resources.	Elimination of grazing (cattle) would have highly positive impacts, providing burro populations do not exceed current levels.	Potential improvement in opportunities and experiences for interpretation, birding, and viewing floral displays.	
		Gold Valley (44)			
	594 tons of forage available for reallocation. See Fishlake Valley.	Overall impact: Positive. Wildlife habitat would improve. Burro numbers would be at a level incompatible with sensitive wildlife resources.	Elimination of grazing (cattle) would have moderately positive impacts, providing burro populations remain at current levels.	Potential improvement in opportunities and experiences for hunting.	
		Horsethief Springs (45)			
	1,196 tons of forage available for reallocation. See Fishlake Valley.	Overall impact: Highly positive. The current fair condition of the range would improve. Sensitive riparian habitat would improve. Competition between Bighorn and livestock would be eliminated. The declining trend in tortoise populations would stabilize.	Elimination of grazing (cattle) would have moderately positive impacts.	Potential improvement in opportunities and experiences for hunting.	
		Kessler Springs (46)			
	3,968 tons of forage available for reallocation. See Fishlake Valley.	Overall impact: Positive. Wildlife habitat would improve. Declining trends in tortoise populations may stabilize. Burro numbers would be at a level incompatible with the high number of sensitive wildlife resources.	Elimination of grazing (cattle) would have highly positive impacts, providing burro populations remain at current levels.	Potential improvement in opportunities and experiences for interpretation and hunting.	

Table GR-3 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
Lanfair Valley (47)					
	6,021.7 tons of forage available for reallocation. See Fishlake Valley.	Overall impact: Positive. Wildlife habitat would improve. Declining trends in tortoise populations may stabilize. Competition between Bighorn and cattle would be eliminated. Burro numbers would be at levels incompatible with the many sensitive wildlife resources.	Elimination of grazing (cattle) would have highly positive impacts, providing burro populations remain at current levels.	Potential improvement in opportunities and experiences for hunting and interpretation.	
Piute Valley (48)					
	89.1 tons of forage available for reallocation. See Fishlake Valley.	Overall impact: Highly positive. Wildlife habitat would improve. Declining trends in tortoise populations may stabilize.	Elimination of grazing (horses/cattle) would have mildly positive impacts, providing burro populations remain at current levels.		
Round Valley (49)					
	13.4 tons of forage available for reallocation. See Fishlake Valley.	Overall impact: Highly positive. The current poor and declining condition of the range would improve significantly.	Elimination of grazing (cattle) would have no significant impacts.		
Valley View (50)					
	4,201 tons of forage available for reallocation. See Fishlake Valley.	Overall impact: Positive. Wildlife habitat would improve. Declining trends in tortoise populations may stabilize. Burro numbers would be at a level incompatible with the many sensitive wildlife resources.	Elimination of grazing (cattle) would have moderately positive impacts, providing burro populations remain at current levels.	Potential improvement in opportunities and experiences for hunting, interpretation, and viewing floral displays.	
Valley Wells (51)					
	2,300.8 tons of forage available for reallocation. See Fishlake Valley.	Overall impact: Positive. Wildlife habitat would improve. Declining trends in tortoise populations may stabilize. Burro numbers would be at a level incompatible with wildlife resources.	Elimination of grazing (cattle) would have moderately positive impacts, providing burro populations remain at current levels.		

Table GR-3 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
		Ford Dry Lake (52)			
	742.5 tons of forage available for reallocation. See Fishlake Valley.	Overall impact: Highly positive. Wildlife habitat would improve. Declining trends in tortoise populations may stabilize.	Elimination of grazing (sheep) would have mildly positive impacts.	Potential improvement in opportunities and experiences for ORV free play, interpretation, and hunting.	
		Jean Lake (53)			
	154 tons of forage available for reallocation. See Fishlake Valley.	Overall impact: Highly positive. Wildlife habitat would improve. Declining trends in tortoise populations would stabilize.	Elimination of grazing (cattle) would have mildly positive impacts.		
		Lazy Daisy (54)			
	1,188 tons of forage available for reallocation. See Fishlake Valley.	Overall impact: Positive. Wildlife habitat would improve. Declining trends in tortoise populations may stabilize. Competition between Bighorn and livestock would be eliminated. Burro numbers would be at a level incompatible with wildlife resources.	Elimination of grazing (cattle) would have highly positive impacts, providing burro populations remain at current levels.	Potential improvement in opportunities and experiences for interpretation and hunting.	
		Sheep Driveway (55)			
	See Antelope Valley.	Overall impact: Highly positive. The current fair condition of the range would improve.	Elimination of grazing (sheep) would have no significant impacts.		

Table GR-4

GRAZING ELEMENT
BALANCED ALTERNATIVE

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
Fish Lake Valley 1)					
25% of the allotment covered by sensitive soils.	Impacts on vegetation same as No Action Alternative.	Overall impact: Positive. Potential impacts on Pallid Kangaroo Mouse may occur. Spring grazing would affect reproductive success of some species.	Overall impacts would be low. Potential impacts on 640 acres of high sensitivity significance and 20 cultural sites (estimated).	No change.	No change.
Bar 99 (2)					
75% of the allotment covered by sensitive soils.	Impacts on vegetation same as No Action Alternative.	Overall impact: Positive. Potential impacts on Pallid Kangaroo Mouse (1 site). Reproductive success of some species would be affected by spring grazing. Deterioration of wildlife habitat would result due to livestock concentration at proposed water developments. Construction of pipeline would temporarily disrupt wildlife habitat.	Low overall impact. Potential impact on: - <640 acres very high/high cultural significance. - 175 cultural sites (estimated).		No change.
Deep Springs (3)					
60% of the allotment covered by sensitive soils.	Impacts on range and vegetation substantially reduced by reduction of livestock stocking rates, which eliminates the overdraft on available forage, and range improvements (See Appendix 2.) Range condition should improve under the management proposals put forth in this alternative, provided of course that full implementation takes place. Thus the overall impact on vegetation, relative to its present condition is positive. This does not mean, however, a return to some "pristine" state. Under grazing there will always be some differences in the vegetation as compared to ungrazed situations. This fact is implicit throughout all the allotments.	Overall impact: No substantial impact. Potential impacts on: - Black Toad (3,840 acres). - Mule Deer (4,480 acres). - Pallid Kangaroo Mouse (8,640 acres). - Ord's Kangaroo Rat (1 site). - Prairie Falcon (22,400 acres, 1 eyrie). - Deep Springs Valley shadscale community (8,960 acres). Reproductive success of some species would be affected by spring grazing. Deterioration of wildlife habitat would result due to livestock concentration at proposed water developments. Construction of fences and pipelines would temporarily disrupt wildlife habitat. Potential loss of marsh habitat of State-listed rare Black Toad due to water developments. Proposed reduction in burro and horse numbers would result in improvement of wildlife habitat. However, numbers would still be maintained at levels incompatible with sensitive wildlife species.	Overall impacts would be moderate due to trampling, spring development and pipeline construction. Potential impacts on: - 1,208 acres of very high cultural sensitivity and significance. - 12,800 acres high cultural sensitivity and significance. - 2,560 acres high burro site potential. - 565 cultural sites (estimated).	Potential reduction i sightseeing opportunities and experiences for bird watching.	Small reduction in operator's total forage supply.

Table GR-4 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
		Last Chance (4)			
80% of the allotment covered by sensitive soils.	Potential impacts on RT&EPs: - *Erigonum ovalifolium* var. *vimineum* - *Astragalus lentiginosus* var. *sesquimetralis* - *Lupinus holmgrenanus* Impacts on vegetation same as Deep Springs.	Overall impact: No substantial impact. Potential impacts on: - Desert Bighorn (32,640 acres). - Mule Deer (12,600 acres). - Prairie Falcon (48,000 acres, 1 eyrie). - Pallid Kangaroo Mouse (2 sites). Proposed reduction in burro numbers would improve wildlife habitat. However, habitat degradation by burros and competition for food, space, and water would continue. Bighorn numbers should stabilize or improve.	Low overall impacts, but no reduction of trampling. Potential impacts on: - 1,920 acres very high cultural sensitivity / significance. - 7,040 acres high cultural sensitivity / significance. - 11,520 acres high buried site potential. - 1,130 cultural sites (estimated).	Potential reduction in deer and chukar hunting opportunities and experiences.	26% AUM reduction in this allotment resulting in a moderate reduction for the total operation.
		Oasis (5)			
60% of the allotment covered by sensitive soils.	Impacts on vegetation same as Deep Spring.	Overall impact: Positive. Potential impacts on: - Yellow-billed Cuckoo (1 site). - Yellow - breasted Chat (1,920 acres). - Swainson's Hawk (1 site). - Prairie Falcon (4,160 acres). - Cottonwood Creek (1,920 acres). Reproductive success of some species would be affected by spring grazing. Proposed reduction in wild horse numbers would improve wildlife habitat.	Low overall impacts. Potential impacts on: - 640 acres very high sensitivity / significance. - 5,760 acres high cultural sensitivity / significance. - 7,680 acres high / very high buried site potential. - 280 cultural sites (estimated).	Potential reduction in sightseeing opportunities and experiences for bird watching and floral displays.	No significant impacts.
		South Oasis (6)			
50% of the allotment covered by sensitive soils.	Impacts on vegetation same as Deep Springs.	Overall impact: No substantial impact. Potential impacts on: - Pallid Kangaroo Mouse (3 sites). - Prairie Falcon (9,600 acres). Reproductive success of some species would be affected by spring grazing. Construction of pipeline and fences would temporarily disrupt wildlife habitat. Concentration of livestock used at proposed water developments would result in localized wildlife habitat deterioration. Proposed reduction in overall wild horse and burro numbers would improve wildlife habitat. However, habitat degradation and competition would be expected to continue.	Potential impacts on: - 5,760 acres high buried site potential. - 130 cultural sites (estimated).		Would be reduced to marginal size operation.

Table GR-4 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
		Darwin (7)			
	Impacts on vegetation same as Deep Springs	Overall impact: No substantial impact. Potential impacts on: - Yellow-breasted Chat (640 acres). - Prairie Falcon (8,320 acres, 1 eyrie). - Darwin Falls ACEC (640 acres). Wildlife habitat and numbers would improve due to proposed reductions in burro numbers. Construction of fences would temporarily disrupt wildlife habitat.	Low overall impact. Potential impacts on: - 1,280 acres very high significance / sensitivity. - 2 linear miles of historic roads and trails. - 25 cultural sites (estimated).	Potentially adverse impacts on interpretation opportunities and experiences.	No significant change.
		Hunter Mountain (8)			
	Impacts on vegetation same as Deep Springs.	Overall impact: No substantial impact. Potential impacts on: - Golden Eagle (640 acres). - Panamint Kangaroo Rat (21,120 acres). - Desert Bighorn Sheep (21,760 acres). - 2 Bighorn corridors. - Panamint Alligator lizard (1 site). - Prairie Falcon (640 acres). - Pallid Bat (1 site). - Panamint Chipmunk (30,400 acres). - Mule Deer (50,368 acres). - Grapevine Canyon (5,120 acres). - Lee Flat shadscale (30,720 acres). Reproductive success of some species would be affected by spring grazing. Construction of fences and pipeline would temporarily disrupt wildlife habitat. Fences could potentially restrict movement of big game species and cause injuries to bighorn. Concentration of livestock use at proposed water developments would result in localized habitat deterioration. Proposed reduction in wild horse and burro numbers would improve wildlife habitat over existing conditions. However, habitat degradation and competition with wildlife would continue and probably prevent any increase in the Hunter Mountain bighorn herd.	Village, temporary and special activity sites will be impacted by spring development. Pipelines / catchment may impact buried sites. Potential impacts on: - 5,760 acres very high cultural significance / sensitivity. - 11,520 acres high cultural significance / sensitivity. - 56,320 acres high buried site potential. - 690 cultural sites (estimated).	Potential reduction in hunting opportunities and experiences.	Probably make the ranch a sub-marginal operation.
		Lacey-Cactus-McCloud (9)			
	Impacts on vegetation same as Deep Springs.	Overall impact: Highly negative. Potential impacts on: - Mohave Ground Squirrel (56,960 acres). - Inyo Brown Towhee (1,280 acres). - Panamint Kangaroo Rat (1 site). - Golden Eagle (86,400 acres, 3 eyries).	Potential impacts on: - 3,840 acres very high cultural significance / sensitivity. - 21,760 high cultural significance / sensitivity. - 56,960 acres high buried site potential.	Potential reduction in hunting opportunities and experiences. Potential adverse impact on interpretive opportunities and experiences.	No significant impact.

Table GR-4 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
		Lacey-Cactus-McCloud (cont.)			
		- Desert Bighorn Sheep (272,000 acres). - Panamint Chipmunk (1,280 acres). - Mule Deer (166,400 acres). - Prairie Falcon (13,440 acres). - Townsend's Big-eared Bat (2 sites). - Pallid Bat (2 sites). - Black Springs ACEC (640 acres). Reproductive success of some species would be affected by spring grazing. Deterioration of wildlife habitat would result due to livestock concentration at numerous proposed water developments. Construction of fences and pipeline would temporarily disrupt wildlife habitat. Fences could potentially restrict movement of big game species and cause injuries to bighorn. Proposed reduction in wild horse and burro numbers would improve habitat, but habitat degradation and competition would continue.	- 20 linear miles of significant historic roads and trails. - 1,865 cultural sites (estimated). Less site trampling overall; more where range improvements occur.		
		Olancha Common (10)			
80% of the allotment covered by sensitive soils.	Impacts on vegetation same as No Action Alternative, slight reduction in stocking rates, livestock use declines from 51.2 lb/acre to 47.8 lb, still relatively high. A potential for negative impact, especially during draught years, still exists.	Overall impact: Negative. Potential impacts on: - Mohave Ground Squirrel (1,920 acres). - Golden Eagle (2,560 acres). - Chisel-toothed Kangaroo Rat (1 site). Spring grazing would affect reproductive success of some species.	Low overall impacts. Potential impacts on: - 640 acres high / very high cultural sensitivity / significance. - 7,680 acres high buried site potential. - 14 linear miles of historic roads and trails. - 14 linear miles of significant historic roads and trails. - 200 cultural sites.		No change.
		Tunawee (11)			
70% of the allotment covered by sensitive soils.	Impacts on vegetation same as No Action Alternative. Burros are controlled but AUMs previously used by burros are now allocated to cattle so that over-level of grazing remains the same.	Overall impact: Highly negative. Potential impacts on: - Mohave Ground Squirrel (43,520 acres). - Golden Eagle (17,920 acres, 1 eyrie). - Osprey (1 site). - Mule Deer (15,360 acres). - East Sierra Canyons (17,280 acres). Spring grazing would affect reproductive success of some species. Livestock concentration at proposed water developments would result in habitat deterioration at these sites. Construction of pipeline would temporarily disrupt wildlife habitat. Proposed reduction of burros would improve existing habitat conditions, but competition and degradation would continue.	Trampling-related impacts will increase at facility sites. Potential impacts on: - 3,840 acres very high cultural significance / sensitivity. - 12,160 acres high cultural significance / sensitivity. - 28,800 acres high buried site potential. - 20 linear miles of significant historic roads and trails. - 370 cultural sites (estimated).	Potential reduction in hunting opportunities and experiences. Potential reduction in sightseeing opportunities and experiences for bird watching and floral displays.	Moderate increase in cattle.

Table GR-4 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
Antelope Valley (12)					
90% of the allotment covered by sensitive soils.	Impacts on vegetation: since this is an ephemeral allotment, no projections of utilization are available. Management prescriptions for forage use should minimize impact on vegetation. Overall impact on range and vegetation relative to present condition is positive. Ephemeral productivity in this type of range would be as high as 600 lb/acre or as low as 100 lb/acre, depending upon amount of precipitation. A 200 lb/acre limit on ephemeral standing crop, plus a 25% maximum utilization rate as outlined in management prescriptions could eventually have the effect of favoring shrubs over annual plants and may cause an eventual shift in the vegetation toward more shrubs at the expense of ephemerals.	Overall impact: Highly negative. Potential impacts on: - Mohave Ground Squirrel (4,160 acres). Spring grazing would affect reproduction success of some species.	Low overall impact. Potential impacts on: - 65 cultural sites (estimated).		No change.
Bissell (13)					
10% of the allotment covered by sensitive soils.	Potential impacts on RT&EPs - *Cymopterus deserticola* Impacts on vegetation same as Antelope Valley.	Overall impact: Highly negative. Potential impacts on: - Mohave Ground Squirrel (3,840 acres). - Desert Tortoise (4,032 acres) including Desert Tortoise Crucial Habitat (Fremont - Stoddard, 4,032 acres). - Prairie Falcon (3,200 acres). Spring grazing would affect reproductive success of some species. Tortoise numbers would probably stabilize.	Reduction of trampling impacts. Potential impacts on: - 15 cultural sites (estimated).		Turnout date would be delayed 2 to 3 weeks in most years.
Cantil Common (14)					
30% of the allotment covered by sensitive soils.	Potential impacts on RT&EPs: - *Chorizanthe spinosa* - *Sclerocactus polyancistrus* - *Pholisma arenarium* Potential impacts on UPAs: - *Atriflex spinifera* stand (1 %). Impacts on vegetation same as Antelope Valley.	Overall impact: No substantial impact. Potential impacts on: - Mohave Ground Squirrel (407,680 acres) including crucial habitat (60,160 acres). - Desert Tortoise (348,800 acres) including Desert Tortoise Crucial Habitat (Fremont - Stoddard, 222,080 acres). - Golden Eagle (195,200 acres, 5 eyries). - Prairie Falcon (222,080 acres, 7 eyries). - Townsend's Big-eared bat (1 site). - Pallid Bat (1 site). - Koehn Lake (3,840 acres). - Red Mountain - El Paso Raptor Breeding Area (170,240 acres). Spring grazing would affect reproductive success of some species. Livestock concentration at proposed water developments would result in habitat deterioration.	Well development may destroy stratified site deposits. Facilities will concentrate trampling impacts. Potential impacts on: - 93,440 acres very high cultural sensitivity / significance. - 79,120 acres high cultural sensitivity / significance. - 242,560 acres very high buried site potential. - 6 National Register properties. - 59 linear miles of significant historic roads and trails. - 4,400 cultural sites (estimated).	Potential reduction in hunting opportunities and experiences. Potential reduction in sight - seeing opportunities and experiences for bird watching and floral displays. Potential adverse impact on interpretation opportunities and experiences. Potentially adverse impact on off - road vehicle free play.	Turnout date would be delayed 2 to 3 weeks in most years. In poor years, livestock forage would be reduced by about 20%.

Table GR-4 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
Monolith-Cantil (15)					
40% of the allotment covered by sensitive soils.	Potential impacts on RT&EPs: - *Chorizanthe spinosa* - *Hemizonia arida* - *Sclerocactus polyancistrus* Potential impacts on UPAs: - *Atriplex spinifera* stand (15%). Impacts on vegetation same as Antelope Valley.	Overall impacts: Negative. Potential impacts on: - Mohave Ground Squirrel (49,920 acres) including crucial habitat (6,400 acres). - Desert Tortoise (44,800 acres) including Desert Tortoise Crucial Habitat (Fremont - Stoddard, 44,800 acres). - West Mojave saltbush community (34,560 acres). Reproductive success of some species would be affected by spring grazing. Tortoise numbers may stabilize after declining below existing levels in some areas or continue to decline in other areas.	Moderate overall impact, particularly at sites located near sheet concentration areas. Potential impacts on: - 640 acres high cultural sensitivity / significance. - 1 National Register property (20 Mule Team Route). - 300 cultural sites (estimated).	Potential reduction in sightseeing opportunities and experiences for bird watching and floral displays.	Turnout date would be delayed 2 to 3 weeks in most years. In poor years, livestock forage would be reduced by about 40%.
Oak Creek (16)					
100% of the allotment covered by sensitive soils.	Impact on vegetation same as No Action Alternative.	Overall impact: Highly negative. Potential impacts on: - Mohave Ground Squirrel (128 acres). Reproductive success of some species would be affected by spring grazing.	Low overall impacts. Potential impacts on: - 2 cultural sites (estimated).		No change.
Rudnick Common (17)					
70% of the allotment covered by sensitive soils.	Potential impacts on RT&EPs: - *Chorizanthe spinosa* - *Hemizonia arida* - *Sclerocactus polyancistrus* - *Hemizonia mojavensis* Potential impacts on UPAs: - Kelso Valley oak savannah (100%). - Desert riparian area (100%). Impacts on vegetation: Because of elimination of overdraft by cattle on available forage, range condition should improve. Thus a positive impact will occur on the vegetation relative to its present state.	Overall impact: Highly negative. Potential impacts on: - Mohave Ground Squirrel (80,640 acres) including crucial habitat (3,840 acres). - Tehachapi Slender Salamander (potential 2,560 acres). - Yellow - eared Pocket Mouse (5 sites). - Golden Eagle (82,560 acres, 2 eyries). - Prairie Falcon (101,120 acres, 4 eyries). - Townsend's Big - eared Bat (1 site). - Pallid Bat (1 site). - Spotted Bat (1 site). - East Sierra Canyons (6,400 acres). - Robber's Roost (1,280 acres). - Kelso Valley oak woodland (17,920 acres). - Red Mountain - El Paso Raptor Breeding Area (5,120 acres). - Butterbread - Jawbone Canyon (75,520 acres).	Severe negetive impacts, including trampling, could occur at eight springs which will be developed. Potential impacts on: - 44,160 acres very high cultural sensitivity / significance. - 4,480 acres high buried site potential. - 32 linear miles of significant historic roads and trails. - 3,000 cultural sites (estimated).	Potential reduction in opportunities and experiences for hunting. Potential reduction in signtseeing opportunities and experiences for bird watching and floral displays. Potential adverse impact on interpretive opportunities and experiences. Potential adverse impact on off - road vehicle free play.	Moderate reduction in stocking. Major reduction in loan value of permit.

Table GR-4 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
Rudnick Canyon (cont.)					
		Yearlong grazing would not allow understory vegetation to rest and may result in insufficient forage and cover for wildlife. Construction of fences and pipeline would temporarily disrupt wildlife habitat. Livestock concentration at the numerous proposed water developments would result in habitat deterioration.			
Warren (18)					
100% of the allotment is covered by sensitive soils.	Impact on vegetation same as No Action Alternative.	Overall impact: Highly negative. Potential impacts on: - Mohave Ground Squirrel (640 acres). Reproductive success of some species would be affected by spring grazing.	Moderate to high overall impacts. Potential impacts on: - 1 linear mile of historic roads and trails. - 8 cultural sites (estimated).		No change.
Walker Pass (19)					
90% of the allotment covered by sensitive soils.	Potential impacts on RT&EPs: - *Phacelia novenmillensis* Potential impacts on UPAs: - Three desert riparian areas (100%). Impacts on vegetation not substantially different from No Action Alternative. Livestock use down to 56.2 lb/acre from 69.3 lb/acre. Current overdraft is eliminated, but use is still high. Range condition may not substantially improve from current rating.	Overall impact: Negative Potential impacts on: - Mohave Ground Squirrel (90,240 acres). - Tehachapi Slender Salamander (potential 13,440 acres). - Golden Eagle (99840 acres, 3 eyries). - Yellow - eared Pocket Mouse (7 sites). - Yellow - breasted Chat (2 sites). - Prairie Falcon (33,920 acres, 1 eyrie). - Mule Deer (31,360 acres). - East Sierra Canyons (68,480 acres). Spring grazing would affect reproductive success of some species. Livestock concentration at proposed water developments would result in localized habitat deterioration. Construction of fences and pipeline would temporarily disrupt wildlife habitat .	Well development (as well as other facilities) may concentrate impacts. Potential impacts on: - 49,920 acres very high cultural sensitivity / significance. - 10,240 acres high cultural sensitivity / significance. - 1,280 very high buried site potentials. - 2 National Register properties. - 6 linear miles of historic roads and trails. - 1,670 cultural sites (estimated).	Potential reduction in sightseeing opportunities and experiences for bird watching and floral displays.	No significant impact.

Table GR-4 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
Pahrump Valley (20)					
10% of the allotment covered by sensitive soils.	Potential impacts on RT&EPs: - *Eriogonum bifurcatum* - *Eriogonum contiguum* Impacts on vegetation not substantially different from No Action Alternative. Livestock use down from 44.3 lb/acre to 43.9 lb/acre.	Overall impact: No substantial impact. Potential impacts on: - Desert Tortoise (12,800 acres). - Golden Eagle (1,280 acres). - Desert Bighorn Sheep (5,760 acres). - Prairie Falcon (5,760 acres). Spring grazing would affect reproductive success of some species. Bighorn Sheep numbers would stabilize or improve. Rate of decline in Tortoise populations would be reduced.	Low overall impacts. Potential impacts on: - 35,200 acres high cultural sensitivity / significance. - 51,840 acres high buried site potential. - 5 linear miles of significant historic roads and trails. - 50 cultural sites (estimated).		No significant change.
Hansen (21)					
Impacts may be more severe on the 90% of the allotment covered by sensitive soils.	Potential impacts on RT&EPs: - *Eriogonum kennedyi* var. *pinicola* Impacts on vegetation not substantially different from No Action Alternative. Livestock use down from 21.6 lb/acre to 19.9 lb/acre. However, overdraft has been eliminated. Range may still not improve at these use levels.	Overall impacts: Positive. Potential impacts on: - Mohave Ground Squirrel (5,760 acres). - Mule Deer (51,840 acres). - Butterbread - Jawbone Canyon (6,400 acres). Spring grazing may affect the reproductive success of some species.	Moderate overall impacts. Potential impacts on: - 5,120 acres very high cultural sensitivity / significance. - 12,800 acres high cultural sensitivity / significance. - 15 linear miles of significant historic roads and trails. - 200 (at least) cultural sites (estimated).	Potential reduction in opportunities and experiences for hunting. Potential reduction in sightseeing opportunities and experiences for bird watching and floral displays.	No significant change.
Boron Sheep (22)					
Impacts may be more severe on the 40% of the allotment covered by sensitive soils.	Potential impact on UPAs: - *Atriplex spinifera* stand (10%). Impacts on vegetation same as Antelope Valley.	Overall impacts: Negative. Potential impacts on: - Mohave Ground Squirrel (4,480 acres). - Desert Tortoise (7,680 acres) including Fremont - Stoddard Desert Tortoise Crucial Habitat (7,680 acres). - West Mojave saltbush community (5,760 acres). Spring grazing would affect reproductive success of some species. Tortoise numbers would continue to decline in some areas and rate of decline would be reduced in other areas.	Moderate trampling impacts. Potential impacts on: - 16,000 acres very high / high buried site potential. - 20 (at least) cultural sites (estimated).	Potential adverst impact on interpretive opportunities and experiences. Potential reduction in sightseeing opportunities and experiences for bird watching and floral displays.	Livestock forage reduced by about 67% in poor years. Turnout date would be delayed 2 to 3 weeks in most years.

Table GR-4 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
Buckhorn Canyon (23)					
40% of the allotment covered by sensitive soils.	Potential impacts on UPAs: - Mojave River plant assemblage (10%). Impacts on vegetation same as Antelope Valley.	Overall impact: Highly negative. Potential impacts on: - Mohave Ground Squirrel (16,640 acres). - Desert Tortoise (16,640 acres) including Fremont - Stoddard Desert Tortoise Crucial Habitat (15,360 acres). - Western Pond Turtle (640 acres). - Swainson's Hawk (1 site). - Prairie Falcon (6,080 acres). - Mojave Vole (1,280 acres). - Mojave River (1,280 acres). Spring grazing may affect reproductive success of some species. Declines in tortoise numbers would be reduced or numbers would stabilize after declining.	Range improvements may disturb stratified site deposits and concentrate impacts. Potential impacts on: - 2,560 acres high cultural sensitivity / significance. - 5,760 acres high buried site potential. - 6 linear miles of historic roads and trails. - 300 (at least) cultural sites (estimated).	Potential reduction in opportunities and experiences for hunting.	Livestock forage in poor years would be reduced by up to 25%. Turnout date would be delayed by 2 to 3 weeks in most years.
Goldstone (24)					
50% of the allotment covered by sensitive soils.	Potential impacts on RT&EPs: - *Astragalus jaegerianus* Impacts on vegetation same as Antelope Valley.	Overall impact: Negative. Potential impacts on: - Mohave Ground Squirrel (8,960 acres). - Desert Tortoise (1,920 acres). - Superior Valley Joshua Tree woodland (1,920 acres). Rate of decline in tortoise numbers would be reduced.	Range improvements may disturb stratified site deposits and concentrate impacts. Potential impacts on: - 5,760 acres very high cultural sensitivity / significance. - 10,240 acres high buried site potential. - 140 (at least) cultural sites (estimated).		Turnout date would be delayed by 2 to 3 weeks in most years.
Granite Mountains (25)					
90% of the allotment covered by sensitive soils.	Potential impacts on RT&EPs: - *Monardella robisonii* Potential impacts on UPAs: - Kelso Dunes unusual plant assemblage (100%). Impacts on vegetation same as Antelope Valley.	Overall impact: No substantial impact. Potential impacts on: - Golden Eagle (5,760 acres, 1 eyrie). - Prairie Falcon (5,760 acres). - Newberry - Granite Mountains Raptor Breeding Area (5,760 acres). Livestock concentration at proposed water developments would result in localized habitat deterioration.	Construction of the well could destroy stratified site deposits. Potential impacts on: - 10,880 acres very high cultural significance / sensitivity. - 33,920 acres high cultural significance / sensitivity. - 106,240 acres high buried site potential. - 2,500 (at least) cultural sites (estimated).	Potential reduction in hunting opportunities and experiences.	Turnout date would be delayed by 2 to 3 weeks in most years.

Table GR-4 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
		Gravel Hills (26)			
60% of the allotment covered by sensitive soils.	Potential impacts on UPAs: - *Atriplex spinifera* stand (40%). Impacts on vegetation same as Antelope Valley.	Overall impact: Negative. Potential impacts on: - Mohave Ground Squirrel (65,920 acres) including critical habitat (14,720 acres). - Desert Tortoise (112,000 acres) including Desert Tortoise Crucial Habitat (Fremont - Stoddard, 56,320 acres). - Golden Eagle (16,640 acres). - Prairie Falcon (5,120 acres). - West Mojave saltbush community (21,120 acres). Spring grazing would affect reproductive success of some species. Livestock concentration at proposed water developments would result in localized habitat deterioration. Tortoise numbers would decline at a reduced rate or stabilize after declining in most of the allotment. Tortoises would decline in some areas.	Construction of the well could destroy stratified site deposits. Potential impacts on: - 2,560 acres very high cultural significance / sensitivity. - 1,920 acres high cultural significance / sensitivity. - 42,880 acres high buried site potential. - 580 (at least) cultural sites (estimated).	Potential reduction in sightseeing opportunities and experiences for bird watching and floral displays. Potential reduction in hunting opportunities and experiences.	In poor years forage would be reduced by up to 30%. Turnout date would be delayed by 2 to 3 weeks in most years.
		Harper Lake (27)			
	Potential impacts on RT&EPs: - *Eriophyllum mojavensis* Potential impacts on UPAs: - *Atriplex spinifera* stand (5%). Impacts on vegetation same as No Action Alternative.	Overall impact: Negative. Potential impacts on: - Mohave Ground Squirrel (7,680 acres). - Desert Tortoise (14,080 acres) including Fremont - Stoddard Desert Tortoise Crucial Habitat (12,800 acres). - Golden Eagle (2,560 acres). - Koehn Lake ACEC (1,920 acres). Livestock concentration at proposed water developments would result in habitat deterioration. Construction of fences would temporarily disrupt wildlife habitat. Tortoise numbers would stabilize after declining in most of the allotment. Some areas would decline or decline at a reduced rate.	Construction of water facilities may disturb stratified deposits. Potential impacts on: - 3,200 acres very high cultural significance / sensitivity. - 2,566 acres high cultural significance / sensitivity. - 30,080 acres high buried site potential. - 9 linear miles of significant historic roads and trails. - 175 (at least) cultural sites (estimated).	Potential reduction in sightseeing opportunities and experiences for bird watching and floral displays. Potential reduction in hunting opportunities and experiences.	Allotment would be given a preferred right AUM base. Additional authorization based on ephemeral forage growth would occur up to 30 days later than at present.

Table GR-4 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
		Lava Mountains (28)			
30% of the allotment covered by sensitive soils.	Impacts on vegetation same as Antelope Valley.	Overall impact: Positive. Potential impacts on: - Mohave Ground Squirrel (16,000 acres). - Desert Tortoise (1,920 acres). - Golden Eagle (16,640 acres). - Prairie Falcon (16,640 acres). - Red Mountain - El Paso Raptor Breeding Area (16,640 acres). Spring grazing would affect reproductive success of some species. Tortoise numbers would decline or decline at a reduced rate.	Low overall impacts. Potential impacts on: - 15,360 acres very high cultural sensitivity / significance. - 1,280 acres high cultural sensitivity / significance. - 15,360 acres high buried site potential. - 2 National Register properties. - 2 linear miles of significant historic roads and trails. - 150 (at least) cultural sites (estimated).	Potential reduction in sightseeing opportunities and experiences for bird watching and floral displays. Potential adverse impacts on interpretive opportunities. Potential reduction in hunting opportunities and experiences.	Turnout date would be delayed by 2 to 3 weeks in most years.
		Pilot Knob (29)			
10% of the allotment covered by sensitive soils.	Potential impacts on RT/EPs: *Phacelia mustelina* Impacts on vegetation same as Antelope Valley.	Overall impact: Negative. Potential impacts on: - Mohave Ground Squirrel (101,760 acres). - Desert Bighorn Sheep (5,760 acres). - Desert Tortoise (29,440 acres). - Golden Eagle (48,000 acres, 1 eyrie). - Prairie Falcon (29,960 acres, 1 eyrie). - Red Mountain - El Paso Raptor Breeding Area (640 acres). - Superior Valley Joshua Tree woodland (3,840 acres). Spring grazing may affect reproductive success of some species. Livestock concentration at numerous proposed water developments would result in much localized habitat deterioration. Tortoises would decline or decline at a reduced rate.	Spring developments and other range improvements will concentrate impacts and may destroy stratified site deposits. Potential impacts on: - 3,840 acres very high cultural site potential. - 1,280 acres high cultural site potential. - 66,560 acres high buried site potential. - 1 National Register property. - 28 linear miles of significant historic roads and trails. - 265 cultural sites (estimated).		Turnout date would be delayed 2 to 3 weeks in most years.

Table GR-4 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
Shadow Mountain (30)					
40% of the allotment covered by sensitive soils.	Potential impacts on UPAs: Ancient creosote bush rings unusual plant assemblage (20%). Impacts on vegetation same as Antelope Valley.	Overall impact: Highly negative. Potential impacts on: - Mohave Ground Squirrel (36,480 acres). - Desert Tortoise (36,480 acres) including Fremont - Stoddard Desert Tortoise Crucial Habitat (36,480 acres). Reproductive success of some species would be affected by spring grazing. Concentration of lifestock at proposed water development would result in habitat deterioration. Tortoise numbers would stabilize after declining or decline at a reduced rate.	Range improvements, especially water developments, will concentrate impacts and may disturb stratified site deposits. Potential impacts on: - 1,280 acres high cultural sensitivity / significance. - 170 (at least) cultural sites (estimated).		Livestock forage reduced by 15% in poor years. Turnout date would be delayed by 2 to 3 weeks in most years.
Spangler Hills (31)					
30% of the allotment covered by sensitive soils.	Impacts on vegetation same as Antelope Valley.	Overall impact: Negative. Potential impacts on: - Mohave Ground Squirrel (66,560 acres). - Desert Tortoise (51,840 acres). - Golden Eagle (12,800 acres). - Prairie Falcon (40,960 acres). - Red Mountain / El Paso Raptor Breeding Area (13,440 acres). Reproductive success of some species would be affected by spring grazing. Livestock concentration at proposed water developments would result in localized habitat deterioration. Tortoise numbers would decline at a reduced rate.	Range improvements, especially water developments, will concentrate impacts and may disturb stratified site deposits. Potential impacts on: - 8,960 acres very high cultural significance / sensitivity. - 7,680 acres high cultural significance / sensitivity. - 54,400 acres high buried site potential - 6 linear miles of significant historic roads and trails. - 600 (at least) cultural sites (estimated).	Potential reduction in sightseeing opportunities and experiences for bird watching and floral displays. Potential adverse impact on interpretive opportunities and experiences.	Turnout date would be delayed by 2 or 3 weeks in most years.
Stoddard Valley (32)					
50% of the allotment covered by sensitive soils.	Impacts on vegetation same as Antelope Valley.	Overall impact: Highly negative. Potential impacts on: - Mohave Ground Squirrel (59,520 acres). - Desert Tortoise (147,840 acres) including Fremont - Stoddard Desert Tortoise Crucial Habitat (129,280 acres). - Prairie Falcon (44,160 acres, 1 eyrie). - Golden Eagle (53,760 acres, 3 eyries). - Newberry - Granite Mountains Raptor Breeding Area (5,120 acres).	Range improvements, especially water developments, may concentrate impacts and disturb stratified site deposits. Moderate impact due to trampling. Potential impacts on: - 10,240 acres very high cultural significance / sensitivity. - 17,280 acres high cultural significance / sensitivity.	Potential reduction in sightseeing opportunities and experiences for bird watching and floral displays. Potential adverse impacts on interpretive opportunities and experiences. Potential reduction in hunting opportunities and experiences.	Livestock forage would be reduced by up to 25% in poor years. Turnout date would be delayed by 2 to 3 weeks in most years.

Table GR-4 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
Stoddard Valley (cont.)					
		- West Mojave saltbush community (15,360 acres). Reproductive success of some species would be affected by spring grazing. Livestock concentration at proposed water developments would result in localized habitat deterioration. Tortoise numbers would stabilize after declining or decline would be reduced in most of the allotment. Some areas would decline.	- 59,520 acres very high buried site potential. - 1 National Register property. - 53 linear miles of significant historic roads and trails. - 1,500 (at least) cultural sites (estimated).		
Superior Valley (33)					
30% of the allotment covered by sensitive soils.	Potential impacts on RT&EPs: - *Astragalus jaegerianus* Impacts on vegetation same as Antelope Valley.	Overall impact: Negative. Potential impacts on: - Mohave Ground Squirrel (154,880 acres). - Desert Tortoise (143,360 acres) including Fremont - Stoddard Desert Tortoise Crucial Habitat (75,520 acres). - Golden Eagle (17,280 acres, 2 eyries). - Prairie Falcon (65,280 acres, 2 eyries). - Superior Valley Joshua Tree woodland (74,240 acres). Reproductive success of some species may be affected by spring grazing. Tortoise numbers would continue to decline, decline at a reduced rate, or stabilize after declining, depending on the area of the allotment. Livestock concentrations at proposed water developments would result in localized habitat deterioration.	Range improvements, especially water developments, may concentrate impacts and disturb stratified site deposits. Potential impacts on: - 35,840 acres very high cultural significance / sensitivity. - 9600 acres high cultural significance / sensitivity. - 168,960 acres very high buried site potential. - 3 linear miles of significant historic roads and trails. - 1,475 (at least) cultural sites (estimated).	Potential reduction in sightseeing opportunities and experiences for bird watching and floral displays. Potential adverse impacts on interpretive opportunities and experiences. Potential reduction in hunting opportunities and experiences.	Livestock forage reduced by 15%. Turnout date would be delayed by 2 to 3 weeks in most years.
Valley Well (34)					
	Potential impacts on UPAs: - East Ord Mountain Jojoba stands (10%). Impacts on vegetation same as No Action Alternative.	Overall impact: Highly negative. Range condition would probably not improve.	Low overall impacts. Possible impacts on: - 4 (at least) cultural sites (estimated).	Potential reduction in hunting opportunities and experiences. Potential adverse impacts on interpretive opportunities and experiences.	No change.

Table GR-4 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
Newberry-Ord (35)					
85% of the allotment covered by sensitive soils.	Potential impacts on UPAs: - East Ord Mountain Jojoba stands (80%). Impacts on vegetation same as Deep Springs.	Overall impact: No substantial impact. Potential impacts on: - Desert Tortoise (3,200 acres). - Golden Eagle (24,320 acres, 4 eyries). - Prairie Falcon (24,320 acres, 2 eyries). - Ord Mountains Jojoba scrub (4,480 acres). - Newberry - Granite Mountains Raptor Breeding Area (23,040 acres). Livestock concentration at numerous proposed water developments would result in localized habitat deterioration. Construction of fences would temporarily disrupt wildlife habitat. Reduction of burros would improve existing conditions, but habitat degradation would continue. Tortoise numbers would decline at a reduced rate.	Range improvements, especially spring development, may disturb stratified site deposits. Increased trampling and erosion may either destroy or alter configurations of cultural sites. Potential impacts on: - 13,440 acres very high cultural significance / sensitivity. - 3,840 acres high cultural significance / sensitivity. - 16,640 acres very high buried site potential. - 265 (at least) cultural sites (estimated).	Potential reduction in opportunities and experiences for bird watching, floral display, sightseeing, hunting and interpretation.	Allotment would be given a preference right AUM base. Additional authorizations based on ephemeral forage growth would occur up to 30 days later than at present.
Rattlesnake Canyon (36)					
90% of the allotment covered by sensitive soils.	Potential impacts on RT&EPs: - *Erigeron parishii* Impacts on vegetation: Stocking rates increased over No Action Alternative. Use up from 50.5 lb/acre to 58 lb/acre. Range improvement will not occur at this level of use and may actually decline.	Overall impact: Positive. Potential impacts on: - Desert Tortoise (1,920 acres). - Desert Bighorn Sheep proposed reintroduction area (8,320 acres). Livestock concentration at numerous proposed water developments would result in localized habitat deterioration. Construction of fences and pipeline would temporarily disrupt wildlife habitat. Reintroduction of Bighorn Sheep may not be possible.	Range improvements, especially spring development, may disturb stratified site deposits. Trampling will increase. Potential impacts on: - 16,000 acres high cultural significance / sensitivity. - 100 (at least) cultural sites (estimated).	Potential adverse impacts on interpretive values.	No significant change.
Whitewater Canyon (37)					
Impacts may be more severe on the 90% of the allotment covered by sensitive soils.	Impacts on vegetation same as Deep Springs.	Overall impact: Highly positive. Potential impacts on: - Mule Deer (42,211 acres). - Little Morongo Canyon pinyon juniper woodland (9,600 acres). Livestock concentration at numerous proposed water developments would result in localized habitat deterioration. Construction of pipeline would temporarily disrupt wildlife habitat. Reduction of burros would improve wildlife habitat and reduce competition, but habitat degradation would continue.	Low impacts. Potential impacts on: - 640 acres very high cultural significance / sensitivity. - 29,440 acres high cultural significance / sensitivity. - 9,600 acres very high / high buried site potential. - 200 (at least) cultural sites (estimated).		No significant change.

Table GR-4 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
Afton Canyon (38)					
40% of the allotment covered by sensitive soils.	Impacts on vegetation same as Antelope Valley.	Overall impact: Negative. Potential impacts on: - Desert Bighorn Sheep (36,480 acres). - Golden Eagle (53,120 acres, 3 eyries). - Prairie Falcon (53,120 acres, 1 eyrie). Livestock concentration at proposed water developments would result in localized habitat deterioration. Construction of fences would temporarily disrupt wildlife habitat. Fences could potentially restrict movement of Bighorn or cause injuries. Competition between livestock and Bighorn would be reduced and Bighorn numbers may stabilize or improve.	Low overall impact. Potential impacts on: - 3,840 acres very high cultural sensitivity / significance. - 32,000 acres high cultural sensitivity / significance. - 122,240 acres very high buried site potential. - 11 linear miles of significant historic roads and trails. - 435 (at least) cultural sites (estimated).	Potential adverse impact on interpretive values and reduction in opportunities and experiences for bird watching, floral sightseeing, and hunting.	Turnout date would be delayed 2 to 3 weeks in most years.
Clark Mountain (39)					
50% of the allotment covered by sensitive soils.	Potential impacts on RT&EPs: - *Forselesia pungens* var. *glabra* - *Tridens pilosum* - *Oryzopsis micrantha* - *Stipa arida* - *Fendlerella utahensis* - *Muhlenbergia arsenii* - *Enneapogon desvauxii* - *Astragalus cimae* var. *cimae.* - *Erigonum heermanii* var. *floccosum* - *Buddleja utahensis* Potential impact on UPAs: - *Abies concolor* unusual plant assemblage (5%) - *Clacipayte* community (1%). Impacts on vegetation same as Deep Springs.	Overall impact: No substantial impact. Potential impacts on: - Desert Tortoise (27,520 acres) including Ivanpah Desert Tortoise Crucial Habitat (25,600 acres). - Golden Eagle (21,760 acres). - Desert Bighorn Sheep, 2 corridors (28,160 acres). - Gray Vireo (1 site). - Gila Monster (1 site). - Panamint Chipmunk (12,800 acres). - Mule Deer (30,080 acres). - Rock Squirrel (3,840 acres). - Clark Mountain ACEC (54,400 acres). Livestock concentration at numerous proposed water developments would result in localized habitat deterioration in much of the allotment. Construction of pipeline and fences would temporarily disrupt wildlife habitat. Fences could potentially restrict movement of Bighorn or cause injuries. Clark Mountain Bighorn herd may stabilize or increase. Tortoise numbers would decline at a reduced rate in most of the allotment. Some areas would decline. Reduction of burros would improve habitat, but habitat degradation and competition would continue at levels incompatible with sensitive wildlife resources.	Range improvements, especially water developments may concentrate impacts and disturb stratified site deposits. Potential impacts on: - 20,480 acres very high cultural significance / sensitivity. - 3,840 acres high cultural significance / sensitivity. - 35,840 acres very high / high buried site potential. - 26 linear miles of significant historic roads and trails. - 825 (at least) cultural sites (estimated).	Potential adverse impacts on interpretive values and reduction in opportunities and experiences for hunting.	Herd would be reduced by 50%. Additional ephemeral use may be authorized in some years, but additional stock would be turned out 30 days later than at present.

Table GR-4 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
		Colton Hills (40)			
40% of the allotment covered by sensitive soils.	Potential impacts on UPAs: - Limestone (*Calciphyte*) communities (50%). - Immense *Yucca Schidigera* (10%) Impacts on vegetation same as Deep Springs.	Overall impact: No substantial impact. Potential impacts on: - Desert Tortoise (106,240 acres) including Desert Tortoise Crucial Habitat (Fenner-Chemehuevi, 123,520 acres). - Golden Eagle (112,000 acres, 3 eyries). - Desert Bighorn Sheep (53,120 acres). - Panamint Kangaroo Rat (5,760 acres). - Fringed Myotis (1 site). - Big Brown Bat (1 site, multiple records). - Pallid Bat (1 site, multiple records, 1 roost). - Townsend's Big-eared Bat (1 roost, 1 multiple record, 1 single record). - Ring-necked snake (1 site). - Black-headed snake (1 site). - Panamint chipmunk (4,480 acres). - Mule Deet (26,880 acres). - Rock Squirrel (19,200 acres). Livestock concentration at proposed water developments would result in localized habitat deterioration. Construction of fences and pipeline would temporarily disrupt wildlife habitat. Fences could potentially restrict Bighorn movement or cause injuries. Bighorn Sheep would remain stable. Reducing burro numbers would improve existing habitat conditions, but habitat degradation and competition would continue at levels incompatible with sensitive wildlife resources. Rate of decline in Tortoise numbers would be reduced in most areas. Some areas would decline or stabilize after declining.	Range improvements, especially water developments, may concentrate impacts and disturb stratified site deposits. Potential impacts on: - 32640 acres very high cultural significance / sensitivity. - 46,720 acres high cultural significance / sensitivity. - 101,120 acres very high / high buried site potential. - 1,700 (at least) cultural sites (estimated).	Potential for adverse impacts on interpretive values and reduction in opportunities and experiences for floral sightseeing.	Same as Protection Alternative, but 2/3 of the ephemeral area would not be subject to a 30-day delay in turnout.

Table GR-4 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
Crescent Peak (41)					
85% of the allotment covered by sensitive soils.	Potential impacts on RT&EPs: - *Cordylanthus parviflorus* Impacts on vegetation not substantially different from No Action Alternative. Livestock use down from 49.5 lb/acre to 42.5 lb/acre. The overdraft has been eliminated but improvement of range condition may not occur, and might even decline, under these high use levels.	Overall impact: Highly positive. Potential impacts on: - Desert Tortoise (4,480 acres) including Ivanpah Desert Tortoise Crucial Habitat (4,480 acres). - Golden Eagle (17,280 acres, 2 eyries). - Desert Bighorn (8,320 acres, seasonal). - Prairie Falcon (17,280 acres, 2 eyries). - Mule Deet (12,160 acres). Livestock concentration at proposed water developments would result in localized habitat deterioration. Construction of pipeline would temporarily disrupt wildlife habitat. Bighorn sheep numbers would remain stable. Riparian habitat would improve. Rate of decline of Tortoise numbers would be reduced in most of the allotment. Other areas would stabilize after declining.	Range improvements, especially water developments, may concentrate impacts and disturb stratified site deposits. Potential impacts on: - 8,320 acres high cultural significance / sensitivity. - 10,240 acres very high / high buried site potential. - 375 (at least) cultural sites (estimated).	Potential for reduction in opportunities and experiences for hunting and floral display sightseeing.	No significant change.
Cronese Lake (42)					
20% of the allotment covered by sensitive soils.	Potential impacts on RT&EPs: - *Androstephium brevifolium* - *Castela emoryi* Potential impacts on UPAs: - Crucifixion thorn stand (100%). Impacts on vegetation same as Antelope Valley.	Overall impact: No substantial impact. Potential impacts on: - Yuma Clapper Rail (1 site). Livestock concentration at proposed water developments would result in localized habitat deterioration. Construction of pipeline and fences would temporarily disrupt wildlife habitat.	Range improvements, especially water developments, may concentrate impacts and disturb stratified site deposits. Potential impacts on: - 14,720 acres very high cultural significance / sensitivity. - 10,240 acres high cultural significance / sensitivity. - 65,280 acres very high buried site potential. - 16 linear miles of historic roads and trails. - 515 cultural sites (estimated).	Potential adverse impact on interpretive opportunities and experiences.	Turnout date would be delayed 2 to 3 weeks in most years.

Table GR-4 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
Grantie Mountains (43)					
Impacts may be more severe on the 50% of the allotment covered by sensitive soils.	Potential impacts on: - *Monordella robinsonii.* Impacts on vegetation same as Deep Springs.	Overall impact: Negative. Potential impacts on: - Yellow - billed cuckoo (1 site). - Desert Tortoise (16,640 acres). - Golden Eagle (58,240 acres, 3 eyries). - Desert Bighorn Sheep (78,080 acres). - Seven endemic beetles (22,400 acres). - Black - headed Snake (1 site). - Gila Monster (1 site). - Prairie Falcon (6,400 acres). - Townsend's Big-eared Bat (1 site). - Pallid Bat (1 site). - Panamint Chipmunk (30,080 acres). - Rock Squirrel (17,280 acres). - Mule Deer (67,200 acres). - Kelso Dunes ACEC (22,400 acres). - Granite Mountains representative habitat (57,600 acres). Livestock concentrations at proposed water developments would result in localized habitat deterioration. Construction of pipeline and fences would temporarily disrupt wildlife habitat. Fences could potentially restrict Bighorn movement and cause injuries. Reduction of burros would improve habitat, but maintaining at proposed levels would still result in habitat degradation and loss of sensitive wildlife resources. Bighorn herds would remain stable.	Range improvements, especially water developments, may concentrate impacts and disturb stratified site deposits. Potential impacts on: - 640 acres high cultural. - 5 (at least) cultural sites (estimated).		
Gold Valley (44)					
40% of the allotment covered by sensitive soils.	Potential impacts on UPAs: - *Artemisia tridentata* stands. - Woods / Hackberry Mountain cacti (40%). - Immense Yucca (10%). Impacts on vegetation same as Deep Springs.	Overall impact: Highly positive. Potential impacts on: - Desert Bighorn Sheep (3,200 acres). - Golden Eagle (15,360 acres, 1 eyrie). - Panamint Kangaroo Rat (4,480 acres). - Prairie Falcon (15,360 acres). - Gray Vireo (1 site). - Panamint Chipmunk (1,280 acres). - Mule Deer (12,240 acres). Livestock concentration at proposed water developments would result in localized habitat deterioration. Construction of fences and pipeline would temporarily disrupt habitat. Fences could potentially restrict Bighorn movement or cause injuries. Reducing burros would improve habitat, but degradation and competition would continue at levels incompatible with sensitive wildlife resources. Bighorn Sheep herds would remain stable. Riparian habitat would improve.	Range improvements, especially water developments, may concentrate impacts and disturb stratified site deposits. Potential impacts on: - 7,040 acres very high cultural significance / sensitivity. - 8,320 acres high cultural significance / sensitivity. - 19,200 acres very high / high buried site potential. - 16 linear miles of significant historic roads and trails. - 230 (at least) cultural sites (estimated).	Potential reduction in opportunities and experiences for hunting.	Ranch would be economically marginal.

Table GR-4 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
		Horsethief Springs (45)			
70% of the allotment covered by sensitive soils.	Potential impacts on RT&EPs: - *Buddleja utahensis* - *Penstemon stephensii* - *Potentilla patellifera* - *Oryzopsis micrantha* Potential impacts on UPAs: - Limestone (*calciphote*) communities - White fir forest enclaves - *Nolina wolfi* stands. Impacts on vegetation same as No Action Alternative.	Overall impact: Negative. Potential impacts on: - Desert Bighorn Sheep (39,040 acres). - Kingston Mountain Chipmunk (26,240 acres). - Desert Tortoise (14,720 acres). - Golden Eagle (53,120 acres, 1 eyrie) - Black - headed Snake (1 site). - Prairie Falcon (4,480 acres). - Townsend's Big - eared Bat (1 site). - Kingston Range representative habitat (33,920 acres). - California Valley Mesquite thicket (5,120 acres). Livestock concentration at numerous proposed water developments would result in localized habitat deterioration. Construction of pipeline would temporarily disrupt wildlife habitat. Tortoise numbers would decline. Bighorn Sheep would remain stable or increase.	Range improvements, especially water developments, may concentrate impacts and disturb stratified site deposits. Potential impacts on: - 6,400 acres very high buried site potential. - 4 linear miles of significant historic roads and trails. - 375 (at least) cultural sites (estimated).	Potential reduction in opportunities and experiences for hunting.	No change.
		Kessler Springs (46)			
20% of the allotment covered by sensitive soils.	Potential impacts on RT&EPs: - *Astragalus cimae* var. *cimae* - *Cordylanthus pariviflorus* Potential impacts on UPAs: - Joshua Tree forest - *Artemisia tridentata* Impacts on vegetation not substantially different from No Action Alternative. Cattle use down from 31.3 lb/acre to 30.1 lb/acre. Burro use down from 2.3 lb/acre to 2.0 lb/acre. Over draft has been eliminated. Slight improvement possible under management practices implicit in this Alternative. Deterioration of range beyond that which has already occurred would be arrested.	Overall impact: Positive. Potential impacts on: - Desert Tortoise (151,680 acres) including Kelso - Old Dad Desert Tortoise Crucial Habitat (74,240 acres) and Ivanpah Desert Tortoise Crucial Habitat (87,040 acres). - Golden Eagle (92,800 acres, 2 eyries). - Desert Bighorn Sheep (23,040 acres). - Panamint Kangaroo Rat (30,080 acres). - Prairie Falcon (19,200 acres). - Big Brown Bat (1 record). - Townsend's Big - eared Bat (2 records, 1 roost). - Gray Vireo (6 sites). - Swainson's Hawk (38,400 acres, 3 nest sites). - Panamint Chipmunk (22,400 acres). - Mule Deer (33,920 acres). - Rock Squirrel (21,120 acres). - Cima Dome (14,080 acres). - New York Mountains (20,480 acres). Livestock concentrations at numerous proposed water developments would result in localized habitat deterioration. Construction of pipeline and fences would temporarily disrupt wildlife habitat. Fences could potentially restrict Bighorn movement or cause injuries. Rate of decline of Tortoise	Range improvements, especially water developments, may concentrate impacts and disturb stratified site deposits. Potential impacts on: - 7,680 acres very high cultural sensitivity / significance. - 50,560 acres high cultural sensitivity / significance. - 112,640 acres very high / high buried site potential. - 26 linear miles of significant historic roads and trails. - 2,100 (at least) cultural sites (estimated).	Potential for adverse impact on interpretive values and reduction in opportunities and experiences for hunting.	No significant change.

Table GR-4 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
Kessler Springs (cont.)					
		numbers would be reduced in most of the allotment. In some areas numbers would stabilize after declining. Bighorn numbers would stabilize or improve. Reducing burro numbers would improve habitat. However numbers would remain at a level incompatible with sensitive wildlife resources.			
Lanfair Valley (47)					
40% of the allotment covered by sensitive soils.	Potential impacts on RT&EPs: - *Eriogonum heermanii* var. *floccosum* - *Eriogonum ericifolium* var. *thornei* - *Astragalus cimae* var. *cimae* - *Cordylanthus parviflorus* Potential impacts on UPAs: - *Artemisia tridentata* - Lanfair Valley scrub steppe - Woods / Hackberry cacti - Limestone community - White fir enclave - *Fouquierra splendens* - *Dalea spinosa* - Chaparral enclaves. Impacts on vegetation same as Deep Springs.	Overall impact: No substantial impact. Potential impacts on: - Yellow-billed cuckoo (1 site, breeding location). - Desert Tortoise (131,840 acres) including Fenner-Chemehuevi Desert Tortoise Crucial Habitat (196,480 acres). - Golden Eagle (170,880 acres, 2 eyries). - Desert Bighorn Sheep (78,080 acres). - Panamint Kangaroo Rat (21,760 acres). - Gray Vireo (9,600 acres, 3 site records). - Yellow-breasted Chat (2 sites). - Prairie Falcon (154,880 acres, 3 eyries). - Swainson's Hawk (89,600 acres, 3 nesting records). - Rock Squirrel (12,160 acres, 5 sites). - New York Mountains (48,640 acres). - Fort Piute ACEC (1,920 acres). Burro numbers would be maintained at a level incompatible with the great number of sensitive wildlife resources. Livestock concentration at proposed water developments would result in localized habitat deterioration. Construction of pipeline would temporarily disrupt wildlife habitat. Bighorn numbers would remain stable. Tortoise numbers would stabilize after declining in most areas. Some areas would decline or the rate of decline would be reduced.	Range improvements, especially water developments, may concentrate impacts and disturb stratified site deposits. Potential impacts on: - 17,280 acres very high cultural sensitivity / significance. - 85,120 acres high cultural sensitivity / significance. - 216,320 acres very high buried site potential. - 1 National Register site. - 52 linear miles of significant historic roads and trails. - 4,100 (at least) cultural sites (estimated).	Potential for adverse impacts on interpretive values and reduction in opportunities and experiences for hunting.	About 2/3 of ephemeral areas subject to 30-day delay in turnout. Slight reduction in herd size.

Table GR-4 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
		Piute Valley (48)			
30% of the allotment covered by sensitive soils.	Impacts on vegetation same as Antelope Valley.	Overall impact: Positive. Potential impacts on: - Desert Tortoise (8,320 acres) including Fenner - Chemehuevi Desert Tortoise Crucial Habitat (24,960 acres). - Golden Eagle (24,960 acres). - Prairie Falcon (24,960 acres). Spring grazing would affect reproductive success of some species. Concentration of livestock at proposed water developments would result in localized habitat deterioration. Construction of pipeline would temporarily disrupt wildlife habitat. Removal of burros would result in improved wildlife habitat and increased wildlife numbers. Rate of decline in Tortoise numbers would be reduced.	Range improvements, especially water developments, may concentrate impacts and disturb stratified site deposits. Potential impacts on: - 3,840 acres high cultural sensitivity / significance. - 26,880 acres very high buried site potential. - 125 (at least) cultural sites (estimated).		Turnout delayed by 30 days.
		Round Valley (49)			
40% of the allotment covered by sensitive soils.	Potential impacts on UPAs: - *Artemisia tridentata* stand Impacts on vegetation same as No Action Alternative. However management prescriptions should eliminate trespass. Unfortunately, with the condition that this range is already in, total withdrawal from all grazing should be implemented for several years in order to give the range time to sufficiently recover. Therefore, no positive impacts here. No improvement foreseen.	Overall impact: Highly negative. Potential impacts on: - Golden Eagle (5,760 acres). - Panamint Kangaroo Rat (3,840 acres). - Prairie Falcon (2,560 acres). - Panamint Chipmunk (3,200 acres). - Mule Deer (1,920 acres). The range is in poor and declining condition. The proposed action would probably only slightly improve wildlife habitat. Construction of fences would temporarily disrupt wildlife habitat.	Low to moderate impacts. Potential impacts on: - 640 acres high cultural sensitivity / significance. - 640 acres very high / high buried site potential. - 40 (at least) cultural sites (estimated).		No change.

Table GR-4 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
		Valley View (50)			
30% of the allotment covered by sensitive soils.	Potential impacts on RT&EPs: - *Boutelona simplex* - *Astragalus cimae* var. *cimae* Potential impacts on UPAs: - Artemisia spinescens atriplex *confertifola* association - Joshua tree forest. Impacts on vegetation same as Deep Springs.	Overall impact: No substantial impact. Potential impacts on: - Desert Tortoise (34,560 acres) including Kelso - Old Dad Desert Tortoise Crucial Habitat (23,040 acres) and Shadow Valley Desert Tortoise Crucial Habitat (47,360 acres). - Golden Eagle (71,040 acres, 2 eyries). - Desert Bighorn Sheep (53,120 acres). - Vermilion Flycatcher (1 site). - Swainson's Hawk (35,200 acres). - Panamint Chipmunk (5,120 acres). - Mule Deer (28,160 acres). - Rock squirrel (4,480 acres). - Cima Dome (31,360 acres). Although reducing burro numbers would improve the existing conditions, burro numbers would still be at a level incompatible with sensitive wildlife resources. Concentration of livestock at numerous proposed water developments would result in localized habitat deterioration. Construction of pipeline and fences would temporarily disrupt wildlife habitat. Fences could potentially restrict bighorn movement or cause injuries. Bighorn would remain stable. Tortoise numbers would decline at a reduced rate in most of the allotment. Declines would occur in some areas.	Range improvements, especially water developments, may concentrate impacts and disturb stratified site deposits. Potential impacts on: - 52,480 acres very high cultural significance / sensitivity. - 57,600 acres high cultural significance / sensitivity. - 275,200 acres very high / high buried site potential. - 2 National Register properties. - 15 linear miles of significant historic roads and trails. - 1,950 (at least) cultural sites (estimated).	Potential for adverse impact on interpretive values and reduction in experiences and opportunities for hunting and floral display sightseeing.	Two to three weeks delay in turnout date on ephemeral range when authorized.
		Valley Wells (51)			
30% of the allotment covered by sensitive soils.	Potential impacts on UPAs: - *Artemisia spinescens Atriplex confertifolia* (40%) - Joshua tree forest (30%). Impact on vegetation same as Deep Springs.	Overall impact: Negative. Potential impacts on: - Desert Tortoise (65,920 acres) including Shadow Valley Desert Tortoise Crucial Habitat (46,730 acres). - Panamint Chipmunk (4,480 acres). - Rock squirrel (3,840 acres). - Mule Deer (8,320 acres). - Newberry / Granite Mountains Raptor Area (640 acres). Reducing burro numbers would improve existing conditions, but numbers would still be at a level incompatible with sensitive wildlife resources. Concentration of livestock at numerous proposed water developments would result in localized habitat detertiration. Construction of fences and pipeline would temporarily disrupt wildlife habitat. Tortoise numbers would decline in most of the allotment. Rate of decline would be reduced in some areas.	Range improvements, especially water development, may concentrate impacts and disturb stratified deposits. Potential impacts on: - 8,960 acres very high cultural significance / sensitivity. - 17,280 acres high cultural significance / sensitivity. - 49,280 acres very high buried site potential. - 38 linear miles of significant historic roads and trails. - 823 (at least) cultural sites (estimated).		Two to three weeks delay in turnout date on ephemeral range.

Table GR-4 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
Ford Dry Lake (52)					
	Potential impacts on RT&EPs: - *Corythantha vivipara* var. *alversonii* Impacts on vegetation same as Antelope Valley.	Overall impact: Negative. Potential impacts on: - Desert Tortoise (8,320 acres). - Ford Dry Lake (1,920 acres). - Chuckwalla Valley Dune Thicket (640 acres). Concentration of livestock at proposed water developments would result in localized habitat deterioration. Spring grazing would affect reproductive success of some species. Tortoise numbers would decline.	Low to moderate overall impacts. Potential impacts on: - 8,320 acres high cultural significance / sensitivity. - 102,240 acres very high buried site potential. - 6 linear miles of significant historic roads and trails. - 50 (at least) cultural sites (estimated).	Potential for adverse impact on interpretive values and a reduction in opportunities and experiences for hunting and ORV free play.	Two to three week delay in turnout date.
Jean Lake (53)					
10% of the allotment covered by sensitive soils.	Impacts on vegetation same as No Action Alternative.	Overall impact: Positive. Potential impacts on: - Desert Tortoise (5,760 acres) including Ivanpah Desert Tortoise Crucial Habitat (5,120 acres). Rate of decline of tortoise numbers would be reduced.	Low impacts overall. Potential impacts on: - 640 acres high cultural significance / sensitivity. - 3,840 acres very high / high buried site potential. - 34 cultural sites (estimated).		No change.
Lazy Daisy (54)					
50% of the allotment covered by sensitive soils.	Impacts on vegetation: Although stocking rates are slightly increased, burro use is greatly diminished. Therefore, positive impacts on range conditions and trends are expected.	Overall impact: Positive. Potential impacts on: - Desert Tortoise (224,000 acres) including Fenner - Chemehuevi Desert Tortoise Crucial Habitat (182,400 acres). - Desert Bighorn Sheep (81,280 acres, 1 corridor). - Prairie Falcon (94,720 acres). - Mule Deer (69,760 acres). Reducing burros would improve existing conditions, but numbers would remain at levels incompatible with sensitive wildlife resources. Livestock concentration at proposed water developments would result in localized habitat deterioration. Construction of pipeline would temporarily disrupt wildlife habitat. Rate of decline of tortoise numbers would be reduced in most areas. Numbers in some areas would stabilize after declining or continue to decline in other areas.	Range improvements, especially water developments, may concentrate impacts and disturb stratified site deposits. Potential impacts on: - 49,280 acres very high cultural sensitivity / significance. - 4,480 acres high cultural sensitivity / significance. - 71,680 acres very high / high buried site potential. - 1,465 (at least) cultural sites (estimated).	Potential for adverse impact on interpretive values and a reduction in opportunities and experiences for hunting.	Up to 30-day delay in turnout date on 17% of allotment. Two to three week delay in turnout on any additional ephemeral use authorized.

Table GR-4 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
Sheep Driveway (55)					
	Impacts on vegetation same as Antelope Valley.	Overall impact: Highly negative. Potential impacts on: - Golden Eagle (14,720 acres). - Prairie Falcon (10,240 acres). Spring grazing would affect reproductive success of some species. Range condition should improve.	Moderate to low overall impacts. Potential impacts on: - 4,480 acres very high cultural sensitivity / significance. - 7,040 acres high cultural sensitivity / significance. - 12,800 acres very high / high buried site potential. - 40 (at least) cultural sites (estimated).		
Tecopa (56)					
	Potential impacts on: - *Cordylanthus tecopensis* - *Centaurium namophillus* Potential impacts on UPAs: - Amargosa Gorge (China Ranch) riparian area (100%). Impacts on vegetation same as Antelope Valley.	Overall impact: Highly negative. Potential impacts on: - Yellow - billed Cuckoo (1,280 acres). - Golden Eagle (12,800 acres). - Summer Tanager (320 acres). - Prairie Falcon (12,800 acres). - Nevada Speckled Dace (5,760 acres). - Amargosa River Pupfish (5,760 acres). - Shoshone / Tecopa Pupfish (640 acres). - Amargosa Vole (3,840 acres). A number of unique and sensitive wildlife species and habitats, including Federal and State listed species, would be extremely susceptible to disturbance by grazing. Range condition is only fair and would not improve by adding grazing. Construction of fences would temporarily disrupt wildlife habitat.	Range improvements, especially water developments, may concentrate impacts and disturb stratified site deposits. High to moderate impacts due to trampling are expected. Potential impacts on: - 10,880 acres very high cultural significance / sensitivity. - 1,280 acres high cultural significance / sensitivity. - 88,960 acres very high / high buried site potential. - 11 linear miles of historic roads and trails. - 285 (at least) cultural sites (estimated).	Potential adverse impact on interpretive opportunities and experiences.	Use to be determined yearly.
Rattlesnake Canyon Annex (57)					
	Overall use due to livestock is 19.7 lb/acre, which is consistent with sustained yield, however, no improvement in range and vegetation beyond that which has occurred in the past should be expected.	Overall impact: Negative. Potential impacts on: - Desert Bighorn proposed reintroduction site (17,280 acres). - Golden Eagle (17,280 acres). - Prairie Falcon (17,280 acres). - Mule Deer (17,280 acres). Reintroduction of Desert Bighorn Sheep into this area would not be possible.	Range improvements, especially water developments, may concentrate impacts and disturb stratified site deposits. Potential impacts on: - 6,400 acres very high cultural sensitivity / significance. - 8,960 acres high cultural sensitivity / significance. - 2,560 acres very high / high buried site potential. - 100 (at least) cultural sites (estimated).	Potential reduction in sightseeing opportunities and experiences for bird watching and floral displays.	Would make the ranch a principal source of income.

Table GR-4 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
Johnson Valley (58)					
	Potential impacts on UPAs: - Ancient yucca *schidigera* rings (100%) - Ancient *Larrea* rings (50%) Impacts on vegetation same as Antelope Valley.	Overall impact: Highly negative. Potential impacts on: - Desert Tortoise (49,920 acres) including 49,920 acres of crucial habitat. - Golden Eagle (144,640 acres). - Prairie Falcon (144,640 acres). Tortoise numbers would decline in most of the area. Range condition is only fair and would not improve by adding grazing. Spring grazing would affect reproductive success of some species.	Temporary watering facilities will concentrate trampling. AUM density will cause moderate trampling impacts. Potential impacts on: - 30,080 acres very high cultural sensitivity / significance. - 52,480 acres very high / high buried site potential. - 1 National Register property. - 525 (at least) cultural sites (estimated).	Potential reduction in sightseeing opportunities and experiences for bird watching and floral displays. Potential adverse impact on interpretive opportunities and experiences. Potential reduction in hunting opportunities and experiences.	Use to be determined yearly.
Ludlow (59)					
	Impacts on vegetation same as Antelope Valley.	Overall impact: Negative. Potential impacts on: - Golden Eagle (9,600 acres). - Prairie Falcon (28,800 acres). Spring grazing would affect reproduction success in some species.	High density of sheep grazing may cause moderate to severe trampling impacts, especially around temporary watering facilities. Potential impacts on: - 1,920 acres very high cultural significance / sensitivity. - 5,120 acres high cultural significance / sensitivity. - 44,160 acres very high / high buried site potential. - 120 (at least) cultural sites (estimated).	Potential reduction in sightseeing opportunities and experiences for bird watching and floral displays.	Use to be determined yearly.
Round Mountain (60)					
80% of the allotment covered by sensitive soils.	Impacts on vegetation same as Antelope Valley.	Overall impact: Negative. Potential impacts on: - Mule Deer 25,600 acres). Spring grazing would affect reproductive success of some species.	Potential impacts on: - 14,080 acres very high cultural sensitivity / significance. - 100 (at least) cultural sites (estimated).	Potential for adverse impact on hunting opportunities and experiences.	Would make a sub-marginal livestock operation.

Table GR-4 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
Chemehuevi (61)					
20% of the allotment covered by sensitive soils.	Potential impacts on RT&EPs: - *Castela emory* Impacts on vegetation: Failure to account for burro numbers and control may result in eventual decline of this allotment with severe impacts on range and vegetation. Use by burros is 5,760 AUM or about 81.5 lb/acre. A very high value as compared with other allotments.	Overall impacts: severe. Potential impacts on: - Desert Tortoise (55,040 acres) including Fenner - Chemehuevi Desert Tortoise Crucial Habitat (80,640 acres). - Pronghorn proposed reintroduction site (51,840 acres). Tortoise numbers would decline. Reintroduction of Pronghorn would not be possible. Range condition is only fair and would not improve by adding grazing. Burro numbers, especially without considering forage utilization and allocation, would have a severe impact.	Range improvements, especially water developments, mav concentrate impacts and disturb stratified site deposits. Potential impacts om Potential impacts on: - 6,400 acres very high cultural sensitivity/ ssignificance. - 8,960 acres high cultural sensitivity/significance. - 2,560 acres very high/ high buried site potential. - 100 (at least) cultural sites (estimated).	Potential for reduction in opportunities and experiences for floral display signtseeing and adverse impact on interpretive opportunities and experiences.	Use would be determined yearly. Critical habitat restrictions might make it uneconomical to operate.
Rice Valley (62)					
20% of the allotment covered by sensitive soils.	Impacts of vegetation same as Antelope Valley.	Overall impacts: low to moderate. Potential impacts on: - Prairie Falcon (1,280 acres). Spring grazing would affect reproductive success of some species. The rice Dunes, a unique habitat, could be adversely affected.	Moderate sheep trampling impacts. Potential impacts on: - 640 acres high cultural sensitivity / significance. - 60 (at least) cultural sites (estimated).		Would be determined yearly.
Palen (63)					
30% of the allotment covered by sensitive soils.	Impacts on vegetation same as Antelope Valley.	Overall impacts: moderate. Potential impacts on: - Desert Bighorn Sheep 9,600 acres). - Prairie Falcon (40,960 acres). Spring grazing would affect reproductive success of some species.	Moderate sheep trampling impacts. Potential impacts on: - 640 acres very high cultural sensitivity / significance. - 10,240 acres very high / high buried site potential. - 20 linear miles of significant roads and trails. - 435 (at least) cultural sites (estimated).	Potential for reduction in opportunities and experiences for floral display sightseeing.	Use would be determined yearly.

Table GR-4 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
Ford Dry Lake Annex (64)					
90% of the allotment covered by sensitive soils.	Impacts on vegetation: Same as Chemehuevi. Historical use by burros here was 24 AUM or about .6 lb/acre, so that initial impacts would not be severe. However, at current population recruitment rates, this use level may rise significantly in the next 10 years.	Overall impacts: severe. Potential impacts on: - Desert Tortoise (12,800 acres) including Chuckwalla Valley Desert Tortoise crucial habitat (7,680 acres). - Desert Bighorn (1,280 acres). - Prairie Falcon (32,000 acres). - Mule Deer (6,400 acres). Tortoise numbers would decline. Spring grazing would affect reproductive success. Burro numbers, without considering forage utilization and allocation, would have a severe impact.	Moderate trampling impacts from sheep. Potential impacts on: - 640 acres very high cultural sensitivity / significance. - 7,040 acres high cultural sensitivity / significance. - 22,400 acres very high buried site potential. - 14 linear miles of significant historic roads and trails.	Potential for reduction in opportunities and experiences for hunting and adverse impact on interpretive values.	Use would be determined yearly.
Homewood Canyon (65)					
20% of the allotment covered by sensitive soils.	Impact on vegetation same as Chemeheuvi. Historical use by burros was 3,900 AUM or about 275 lb/acre, an extremely large value which will lead to severe declines in vegetation and range condition.	Overall impacts: severe. Potential impacts on: - Desert Bighorn (14,080 acres). - Golden Eagle (3,200 acres). Bighorn numbers would decline. Spring grazing would affect reproductive success of some species. Burro numbers, without considering forage utilization and allocation, would have a severe impact. Range condition is currently fair and declining. Grazing would result in even greater habitat deterioration.	Historic mountain mining sites could receive little impact, but bottomland based prehistoric and historic sites would be moderately impacted by trampling. Potential impacts on: - 640 acres verh high cultural sensitivity / significance. - 640 acres high cultural sensitivity / significance. - 3,840 acres very high / high buried site potential. - 8 linear miles of significant historic roads and trails. - 165 (at least) cultural sites (estimated).	Potential for adverse impacts on interpretive opportunities and experiences.	Use would be determined yearly.
Death Valley (66)					
	Potential impacts on RT&EPs: - *Nitrophila mojavensis* - *Cordylanthus tecopensis* Problems similar to Chemehuevi but with wild horses. Current use is about .25 lb/acre, at present, a value which is too small to have significant affects on range vegetation.	Overall impacts: moderate. Potential impacts on: Nevada Speckled Dace (trace). - Golden Eagle (1,280 acres). - Prairie Falcon (1,280 acres). Cattle grazing, in addition to wild horses, could have a severe impact on wildlife habitat. Spring grazing could affect reproductive success of some species.	Low overall impact. Potential impacts on: - 11,520 acres very high / high buried site potential. - 80 (at least) cultural sites (estimated).		Would make a sub-marginal operation.

Table GR-4 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
Lathrop Well (67)					
30% of the allotment covered by sensitive soils.	Same as Death Valley. Current use by wild horses is about .9 lb/acre.	Overall impacts: moderate. Potential impacts on: Nevada Speckled Dace (1,280 acres). Cattle grazing, in addition to wild horses, could have a severe impact on wildlife habitat.	Range improvements, especially water developments may concentrate impacts and disturb stratified site deposits. Potential impacts on: - 10,880 acres very high cultural sensitivity / significance. - 9,600 acres very high buried site potential. - 35 (at least) cultural sites (estimated).		Would make a sub-marginal operation.
Granite Mountain Annex (68)					
10% of the allotment covered by sensitive soils.	Same as Antelope Valley.	Overall impacts: severe. Potential impacts on: - Golden Eagle (9,600 acres). - Prairie Falcon (9,600 acres). Range condition is currently poor. Grazing would only increase habitat deterioration.	Range improvements, especially water developments, may concentrate impacts and disturb stratified site deposits. Potential impacts on: - 4,480 acres high cultural sensitivity / significance. - 1,920 acres very high / high buried site potential. - 105 (at least) cultural sites (estimated).	Potential for reduction in opportunities and experiences for bird watching and floral display sightseeing.	Livestock use would be determined yearly.

Table GR-5

GRAZING ELEMENT
USE ALTERNATIVE

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
		Fishlake Valley (1)			
Impacts to soils will be as described for the No Action Alternative, for this and all other allotments under the Use Alternative.	Same as Balanced Alternative.	Overall impact: Negative. See Balanced Alternative.	See Balanced Alternative.		No change.
		Bar 99 (2)			
	Same as Balanced Alternative.	Overall impact: Negative. See Balanced Alternative.	See Balanced Alternative.		No change.
		Deep Springs (3)			
	Same as Balanced Alternative.	Overall impact: Highly negative. See Balanced Alternative.	See Balanced Alternative.	Same as Balanced Alternative.	Small reduction in operator's total forage supply.
		Last Chance (4)			
	Same as Deep Springs, Balanced Alternative.	Overall impact: Negative. See Balanced Alternative.	See Balanced Alternative.	Same as Balanced Alternative.	18% AUM reduction in this allotment resulting in a moderate reduction for the total operation.
		Oasis (5)			
	Same as Deep Springs, Balanced Alternative.	Overall impact: Negative. See Balanced Alternative.	See Balanced Alternative.	Same as Balanced Alternative.	No significant impacts.
		South Oasis (6)			
	Impacts on vegetation virtually identical to this allotment for the Balanced Alternative.	Overall impact: Positive. See Balanced Alternative.	See Balanced Alternative.		Would be reduced to a marginal sized operation.
		Darwin (7)			
	Impacts on vegetation slight. Increase in stocking rates in Use Alternative over No Action Alternative – 30.3 lb./acre as compared to 21.1 lb./acre. However, burro use reduced from 216 lb./acre to 9.3 lb./acre. Overall positive impacts to range and vegetation are expected relative to present condition.	Overall impact: Highly negative. See Balanced Alternative.	See Balanced Alternative.	Same as Balanced Alternative.	No significant change.

Table GR-5 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
		Hunter Mtn. (8)			
	Slight reduction in stocking rates (from 19.8 lb./acre to 19.5 lb./acre), together with complete elimination of wild horses and reduction of burro use from 162.5 lb./acre to 20.9 lb./acre, indicate that positive impacts will accrue to range and vegetation relative to present condition.	Overall impacts: No substantial impacts. See Balanced Alternative.	See Balanced Alternative.	Same as Balanced Alternative.	No change.
		Lacey-Cactus-McCloud (9)			
	Slight increase in stocking rates (from 11.52 lb./acre to 13 lb./acre), together with elimination of wild horses and reduction of burro use (from 51.1 lb./acre to 1.1 lb./acre) will have a positive overall impact on vegetation and range relative to present condition.	Overall impact: Highly negative. See Balanced Alternative.	See Balanced Alternative.	Same as Balanced Alternative.	No significant impact.
		Olancha Common (10)			
	Same as Balanced Alternative.	Overall impact: Negative. See Balanced Alternative.	See Balanced Alternative.		No change.
		Tunawee (11)			
	Same as Balanced Alternative.	Overall impact: Highly negative. See Balanced Alternative.	See Balanced Alternative.	Same as Balanced.	Rancher probably could not use all of the feed.
		Antelope Valley (12)			
	Same as Antelope Valley, Balanced Alternative.	Overall impact: Highly negative. See Balanced Alternative.	See Balanced Alternative.		No change.
		Bissel (13)			
	Same as Antelope Valley, Balanced Alternative.	Overall impact: Highly negative. See Balanced Alternative.	See Balanced Alternative.		Turnout date would be delayed 2-3 weeks in most years.

Table GR-5 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
		Cantil Common (14)			
	Same as Antelope Valley, Balanced Alternative.	Overall impact: Highly negative. For potential impacts on species, see Balanced Alternative. Spring grazing would affect reproductive success of some species. Habitat deterioration would result at proposed water developments. Tortoise numbers in some areas would continue to decline. The decline rate would be reduced in other areas, and stabilize after declining in still other areas.	See Balanced Alternative.	Same as Balanced Alternative.	Turnout date would be delayed 2-3 weeks in most years. In poor years, livestock forage would be reduced by about 20%.
		Monolith-Cantil (15)			
	Same as Antelope Valley, Balanced Alternative.	Overall impact: Negative. See Balanced Alternative.	See Balanced Alternative.	Same as Balanced.	Turnout date would be delayed 2-3 weeks in most years. In poor years livestock forage would be reduced by about 40%.
		Oak Creek (16)			
	Same as Oak Creek, Balanced Alternative.	Overall impact: Highly negative. See Balanced Alternative.	See Balanced Alternative.		No change.
		Rudnick Common (17)			
	Same as Rudnick Common Balanced Alternative.	Overall impact: Highly negative. See Balanced Alternative.	See Balanced Alternative.	Same as Balanced Alternative.	Moderate reduction in stocking. Major reduction in loan value of permit.
		Warren (18)			
	Same as Warren, Balanced Alternative.	Overall impact: Highly negative. See Balanced Alternative.	See Balanced Alternative.		No change.
		Walker Pass (19)			
	Stocking rates slightly higher than in Balanced Alternative. Impacts virtually the same as Walker Pass, Balanced Alternative.	Overall impact: Negative. See Balanced Alternative.	See Balanced Alternative.	Same as Balanced Alternative.	No significant impact.

Table GR-5 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
Pahrump Valley (20)					
	Same as Pahrump Valley, Balanced Alternative.	Overall impact: Highly negative. For potential impacts, see Balanced Alternative. Spring grazing would affect reproductive success of some species. Bighorn Sheep would remain stable. Rate of decline in tortoise populations would be reduced.	See Balanced Alternative.		No significant changes.
Hansen (21)					
	Same as Hansen, Balanced Alternative.	Overall impact: Negative. See Balanced Alternative.	See Balanced Alternative.	Same as Balanced Alternative.	No significang change.
Boron Sheep (22)					
	Same as Antelope Valley, Balanced Alternative.	Overall impact: Negative. See Balanced Alternative.	See Balanced Alternative.	Same as Balanced Alternative.	Livestock forage reduced by about 67% in poor years. Turnout date would be delayed 2-3 weeks in most years.
Buckhorn Canyon (23)					
	Same as Antelope Valley, Balanced Alternative.	Overall impact: Highly negative. See Balanced Alternative.	See Balanced Alternative.	Same as Balanced Alternative.	Livestock forage in poor years would be reduced by up to 25%. Turnout date would be delayed by 2-3 weeks in most years.
Goldstone (24)					
	Same as Antelope Valley, Balanced Alternative.	Overall impact: Negative. See Balanced Alternative.	See Balanced Alternative.		Turnout date would be delayed by 2-3 weeks in most years.
Granite Mtns. (25)					
	Same as Antelope Valley, Balanced Alternative.	Overall impact: No substantial impact. See Balanced Alternative.	See Balanced Alternative.	Same as Balanced.	Turnout date would be delayed by 2-3 weeks in most years.

Table GR-5 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
		Gravel Hills (26)			
	Same as Antelope Valley, Balanced Alternative.	Overall impact: Negative. See Balanced Alternative.	See Balanced Alternative.	Same as Balanced Alternative.	In poor years forage would be reduced by up to 30%. Turnout date would be delayed by 2-3 weeks in most years.
		Harper Lake (27)			
	Same as Harper Lake, Balanced Alternative.	Overall impact: Negative. See Balanced Alternative.	Same as Balanced Alternative, except impacts from fence construction will be less and impacts due to trampling will be greater.	Same as Balanced Alternative.	Allotment would be given a preference right AUM base. Additional authorization based on ephemeral forage growth would occur up to 30 days later than at present.
		Lava Mtns. (28)			
	Same as Antelope Valley, Balanced Alternative.	Overall impact: Positive. See Balanced Alternative.	Same as Balanced Alternative, except that only a slight reduction in trampling would be expected.	Same as Balanced Alternative.	Turnout date would be delayed 2-3 weeks in most years.
		Pilot Knob (29)			
	Same as Antelope Valley, Balanced Alternative.	Overall impact: Highly negative. See Balanced Alternative.	Same as Balanced Alternative.		Turnout date would be delayed 2-3 weeks in most cases.
		Shadow Mt. (30)			
	Same as Antelope Valley, Balanced Alternative.	Overall impact: Highly negative. See Balanced Alternative.	Same as Balanced Alternative.		Livestock forage reduced by 15% in poor years. Turnout date would be delayed by 2-3 weeks in most years.
		Spangler Hills (31)			
	Same as Antelope Valley, Balanced Alternative.	Overall impact: Negative. For potential impacts on species, see Balanced Alternative. Tortoise numbers would decline. Reproductive success of some species would be affected by spring grazing. Livestock concentration at water developments would result in localized habitat deterioration.	Same as Balanced Alternative.	Same as Balanced Alternative.	Turnout date would be delayed 2-3 weeks in most years.

Table GR-5 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
		Stoddard Valley (32)			
	Same as Antelope Valley, Balanced Alternative.	Overall impact: Highly negative. For potential impacts on species, see Balanced Alternative. Tortoise numbers would stabilize after declining, decline, or decline at a reduced rate, depending on the area of the allotment. Reproductive success of some species would be affected. Livestock concentration at proposed water developments would result in localized habitat deterioration.	Same as Balanced Alternative.	Same as Balanced Alternative.	Livestock forage would be reduced by up to 25% in poor years. Turnout date would be delayed by 2-3 weeks in most years.
		Superior Valley (33)			
	Same as Antelope Valley, Balanced Alternative.	Overall impact: Negative. See Balanced Alternative.	Same as Balanced Alternative.	Same as Balanced Alternative.	Livestock forage would be reduced by 15% in poor years. Turnout date would be delayed by 2-3 weeks in most years.
		Valley Well (34)			
	Same as Valley Well, Balanced Alternative.	Overall impact: Highly negative. See Balanced Alternative.	Same as Balanced Alternative.	Same as Balanced Alternative.	No change.
		Newberry-Ord (35)			
	Overall reduction of livestock and burros, elimination of grazing overdraft on available vegetation, and management practices result in overall positive impacts on vegetation relative to present condition.	Overall impact: Highly negative. For potential impacts on species, see Balanced Alternative. Tortoise numbers would decline. Livestock concentration at numerous proposed water developments would result in localized habitat deterioration. Construction of fences would temporarily disrupt wildlife habitat. Reduction of burros would improve existing conditions, but habitat degradation would continue.	See Balanced Alternative.		Allotment would be given a preference right AUM base. Additional authorizations based on ephemeral forage growth would occur up to 30 days later than at present.
		Rattlesnake Canyon (36)			
	Same as Rattlesnake Canyon Balanced Alternative.	Overall impact: Positive. See Balanced Alternative.	See Balanced Alternative.	Same as Balanced Alternative.	No significant change.

Table GR-5 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
Whitewater Canyon (37)					
	Same as Whitewater Canyon, Balanced Alternative, but with slightly higher stocking rates and lower burro use. Overall impacts same as Balanced Alternative.	Overall impact: Highly positive. See Balanced Alternative.	See Balanced Alternative.		No significant change.
Afton Canyon (38)					
	Same as Antelope Valley, Balanced Alternative.	Overall impact: Highly negative. For potential impacts on species, see Balanced Alternative. Livestock concentration at proposed water developments would result in localized habitat deterioration. Construction of fences would temporarily disrupt wildlife habitat. Fences could potentially restrict movement of Bighorn or cause injuries. Cady Mt. Bighorn herd would decline.	See Balanced Alternative.	Same as Balanced Alternative.	Turnout date would be delayed 2-3 weeks in most years.
Clark Mtn. (39)					
	Not substantially different from Balanced Alternative. Burro use is down, but livestock use is higher so that over-use is about the same.	Overall impact: Highly negative. For potential impacts on species, see Balanced Alternative. Livestock concentration at proposed water developments would result in localized habitat deterioration. Construction of pipelines and fences would temporarily disrupt wildlife habitat. Fences could potentially restrict movement of Bighorn or cause injuries. Clark Mt. Bighorn herd would remain stable. Tortoise numbers would decline or decline at a reduced rate. Reduction of burros would improve habitat, but habitat degradation and competition would continue at levels incompatible with sensitive wildlife resources.	See Balanced Alternative.	Same as Balanced Alternative.	Operable but reduction in stocking would be 24%. Additional ephemeral use may be authorized but turnout date would be 30 days later than at present.
Colton Hills (40)					
	Not substantially different from Balanced Alternative. Same reasons as given for Clark Mountain.	Overall impact: Negative. For potential impacts on species, see Balanced Alternative. Rate of decline in tortoise numbers would be reduced, stabilize after declining, or decline. Bighorn numbers would stabilize. See Balanced Alternative for other impacts.	Same as Balanced Alternative except that impacts would be slightly more severe.	Same as Balanced Alternative.	24% reduction in cow-calf operation. No delay in turnout date on ephemerals when authorized.

Table GR-5 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
Crescent Peak (41)					
	Not substantially different from Balanced Alternative.	Overall impacts: No substantial impact. For potential impacts on species, see Balanced Alternative. Livestock concentration at proposed water developments would result in localized habitat deterioration. Construction of pipeline would temporarily disrupt wildlife habitat. Bighorn numbers would remain stable. Deterior or riparian areas would be reduced. Rate of decline of tortoise numbers would be reduced in most of the allotment. Other areas would stabilize after declining.	Same as Balanced Alternative except that impacts would be slightly more severe.	Same as Balanced Alternative.	No significant change.
Cronese (42)					
	Same as Antelope Valley, Balanced Alternative.	Overall impact: Highly negative. For potential impacts on species, see Balanced Alternative. Livestock concentration at proposed water developments would result in localized habitat deterioration. Construction of pipeline and fences would temporarily disrupt wildlife habitat.	Same as Balanced Alternative except that impacts would be less severe than for either the Balanced or the Protection Alternative.	Same as Balanced Alternative.	Turnout date would be delayed 2-3 weeks in most years.
Granite Mt. (43)					
	Not substantially different from Balanced Alternative. Same reasons given for Clark Mountain.	Overall impact: Highly negative. See Balanced Alternative.	Same as Balanced Alternative except that impacts would be slightly more severe.	Same as Balanced Alternative.	Same as Protection Alternative, except more livestock forage available.
Gold Valley (44)					
	Not substantially different from Balanced Alternative. Same reasons as given for Clark Mountain.	Overall impact: No substantial impact. For potential impacts on species, see Balanced Alternative. Livestock concentration at proposed water developments would result in localized habitat deterioration. Construction of fences and pipeline would temporarily disrupt wildlife habitat. Reducing burros would improve habitat but degradation and competition would continue. Bighorn numbers would remain stable.	Similar to Balanced and Protection Alternatives, except that impacts would be less severe.	Same as Balanced Alternative.	Ranch would be economically marginal.

Table GR-5 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
Horsethief Springs (45)					
	Impacts virtually identical to No Action Alternative.	Overall impact: Highly negative. For potential impacts on species, see Balanced Alternative. Tortoise numbers would decline. Bighorn numbers would remain stable or decline. See Balanced Alternative for other impacts.	Same as Balanced Alternative except that impacts would be slightly more severe.	Same as Balanced Alternative.	No change.
Kessler Springs (46)					
	Same as Balanced because of same reasons given for Clark Mountain.	Overall impact: No substantial impact. See Balanced Alternative.	Same as Balanced Alternative except that impacts would be slightly more severe.	Same as Balanced Alternative.	No significant change.
Lanfair Valley (47)					
	Slightly higher stocking rates than Balanced Alternative, slightly lower burro over-use. Impacts same as for Balanced Alternative.	Overall impact: Negative. For potential impacts on species, see Balanced Alternative. Tortoise numbers would decline in much of the area. In other areas the rate of decline would be reduced or numbers would stabilize after declining. See Balanced Alternative for other impacts.	See Balanced Alternative.	Same as Balanced Alternative.	Turnout date on ephemeral range delayed 2-3 weeks in most years.
Piute Valley (48)					
	Same as Antelope Valley.	Overall impact: Negative. See Balanced Alternative.	Same as Balanced Alternative, except that impacts would be slightly more severe.		One third of allotment subject to 30-day delay in turnout date, the rest subject to 2-3 week delay.

Table GR-5 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
		Round Valley (49)			
	Same as Round Valley, No Action Alternative.	Overall impact: Highly negative. See Balanced Alternative.	See Balanced Alternative.		No change.
		Valley View (50)			
	Slightly higher stocking rates than Balanced, and slightly lower burro use. Overall impacts same as Balanced Alternative.	Overall impact: Negative. See Balanced Alternative.	Same as Balanced Alternative except that the impacts would be slightly more severe.	Same as Balanced Alternative.	2-3 week delay in turnout date on ephemeral range when authorized.
		Valley Wells (51)			
	Stocking rates slightly higher than Balanced Alternative, burro use slightly lower. Overall impacts same as Balanced Alternative.	Overall impact: Negative. See Balanced Alternative.	See Balanced Alternative.		2-3 week delay in turnout date on ephemeral range.
		Ford Dry Lake (52)			
	Same as Antelope Valley.	Overall impact: Negative. For potential impacts on species, see Balanced Alternative. Livestock concentration at proposed water developments would result in localized habitat deterioration. Spring grazing would affect reproductive success of some species. Tortoises would be extirpated.	Same as Balanced Alternative except that impacts would be slightly more severe.	Same as Balanced Alternative.	2-3 weeks delay in turnout date.
		Jean Lake (53)			
	Same as Balanced Alternative.	Overall impact: No substantial impact. For potential impacts on species, see Balanced Alternative. Tortoises would decline.	See Balanced Alternative.		No change.
		Lazy Daisy (54)			
	Virtually identical to Balanced Alternative.	Overall impact: Negative. For potential impacts on species, see Balanced Alternative. Tortoise numbers would decline in most areas. Rate of decline would be reduced in some areas or stabilize after declining in other areas. See Balanced Alternative for other impacts.	Same as Balanced Alternative except that impacts would be slightly more severe.	Same as Balanced Alternative.	2-3 week delay in turnout date on any ephemeral use authorized.

Table GR-5 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
Sheep Driveway (55)					
	Same as Antelope Valley, Balanced Alternative.	Overall impact: Highly negative. See Balanced Alternative.	See Balanced Alternative.		No change.
Tecopa (56)					
	Same as Antelope Valley, Balanced Alternative.	Overall impact: Highly negative. See Balanced Alternative.	See Balanced Alternative.	Same as Balanced Alternative.	Use to be determined yearly.
Rattlesnake Canyon Annex (57)					
	Same as Antelope Valley, Balanced Alternative.	Overall impact: Negative. See Balanced Alternative.		Same as Balanced Alternative.	Would make the ranch a principal source income.
Johnson Valley (58)					
	Same as Antelope Valley, Balanced Alternative.	Overall impact: Highly negative. See Balanced Alternative.	Same as Balanced Alternative.	Same as Balanced Alternative.	Use to be determined yearly.
Ludlow (59)					
	Same as Antelope Valley, Balanced Alternative.	Overall impact: Negative. See Balanced Alternative.		Same as Balanced Alternative.	Use to be determined yearly.
Round Mountain (60)					
	Same as Antelope Valley, Balanced Alternative.	Overall impact: Negative. See Balanced Alternative.	See Balanced Alternative.	See Balanced Alternative.	Would make a submarginal livestock operation.
Chemehuevi (61)					
	Same as Chemehuevi Balanced Alternative.	Overall impact: Highly negative. See Balanced Alternative.	See Balanced Alternative.	Same as Balanced Alternative.	Use would be determined yearly.
Rice Valley (62)					
	Same as Antelope Valley, Balanced Alternative.	Overall impact: Negative. See Balanced Alternative.	See Balanced Alternative.		Use would be determined yearly.
Palen (63)					
	Same as Antelope Valley, Balanced Alternative.	Overall impact: Negative. See Balanced Alternative.	See Balanced Alternative.	Same as Balanced Alternative.	Use would be determined yearly.
Ford Dry Lake Annex (64)					
	Same as Ford Dry Lake, Balanced Alternative.	Overall impact: Highly negative. See Balanced Alternative.	See Balanced Alternative.	Same as Balanced Alternative.	Use would be determined yearly.
Homewood Canyon (65)					
	Same as Homewood Canyon, Balanced Alternative.	Overall impact: Highly negative. See Balanced Alternative.	See Balanced Alternative.		Use would be determined yearly.

Table GR-5 (cont.)

Soil	Vegetation	Wildlife	Cultural	Recreation	Socioeconomic
Death Valley (66)					
	Same as Death Valley, Balanced Alternative.	Overall impact: Negative. See Balanced Alternative.	See Balanced Alternative.		Would make a submarginal operation.
Lathrop Well (67)					
	Same as Lathrop Well, Balanced Alternative.	Overall impact: Negative. See Balanced Alternative.	See Balanced Alternative.		Would make a submarginal operation.
Granite Mt. Annex (68)					
	Same as Antelope Valley, Balanced Alternative.	Overall impact: Highly negative. See Balanced Alternative.	See Balanced Alternative.	Same as Balanced Alternative.	Livestock use would be determined yearly.

Table PE - 21

SUMMARY OF WILD HORSES AND BURROS ELEMENT IMPACTS

Resource	No Action Alternative	Protection Alternative	Balanced Alternative	Use Alternative
Air	○	○	○	○
Water	◑	⦶	⦶	⦶
Soil	◑	◑	◑	◑
Vegetation	●	◑	◑	◑
Wildlife	●	◑	◑	◑
Cultural	●	◑	◑	◑
Native American	●	◑	◑	◑
Wilderness	◑	○	○	○
Visual	○	○	○	○
General Recreation	○	○	○	○
Motorized Vehicle	○	○	○	○
Grazing	◑	◑	◑	◑
Burros	◑	◑	◑	◑
Socioeconomic	○	○	○	○

• LEGEND •

○	No significant impact
⦶	Positive impact
⊕	Highly positive impact
◑	Negative Impact
●	Highly negative impact

Note: The No Action Alternative assumes present BLM management, actual livestock use, and that wild horse and burro numbers will remain unchanged over the next 20 years (see page 31 of the plan for a more complete explanation).

The Protection, Balanced, and Use Alternative columns indicate impacts anticipated in the next 20 years when an alternative is compared against existing 1980 conditions.

IMPACTS OF THE WILD HORSE AND BURRO ELEMENT

The impacts described in this section would result from the maintenance or adjustment of wild horse and burro populations. All alternatives, including even the "No Action" alternative maintaining 1979 population levels, will require substantially increased funding. If herd management efforts fall short of the targeted alternative levels, impacts will be significantly higher than indicated in the following assessments. To supplement the overall comparison of the impacts of each alternative, a summary of the potential impacts in each herd management area is included in Appendix 12.

■ On Water Resources and Soil. Impacts would be as described for Livestock Grazing.

■ On Vegetation. Burros are adversely affecting the desert and rangelands of the western United States (Corothers 1975, Cook 1975). Damage to vegetation is particularly great near water sources but may also extend into open range (Fisher 1975).

There are currently about 8,800 burros and 750 horses within the CDCA.

These numbers may be minimum estimates. Burros are damaging vegetation in Death Valley, at Big Sand Springs (Mary DeDecker pers. comm.), and on the Naval Weapons Center. If not controlled, they may seriously impact vegetation by both browsing and trampling, and this would substantially reduce both wildlife and domestic livestock forage. One State Endangered plant species is known to be seriously threatened by burro depredations: Astragalus lentiginosus var. sesquimetralis at Big Sand Spring on the Last Chance Allotment. Other problem areas include 1) Piper Mountain, 2) Saline Valley, 3) Hunter Mountain, 4) Lee Hat, 5) Towne Pass, 6) Panamint Mountains, 7) Trona, 8) Coso Basin, (Pilot Knob, Slocum) and Summit Pass, 9) Clark Mountains, 10) Indian Springs, 11) Providence Mountains, and 12) Chemehuevi.

In the No Action Alternative AUMs would be allocated to livestock, wild horses, and burros which would exceed perennial carrying capacity by 65,300 AUMs. Thirty Unique Plant Assemblages (UPAs) and 75 species of Rare, Threatened, or Endangered plants could be impacted.

The objective of the No Grazing Sub-alternative of the Protection Alternative is: "to allocate all vegetation to wildlife species, wild horses and burros, and non-consumptive uses." The free-roaming nature of burros and wild horses is not conducive to application of range management techniques, such as rest, rotation, seasonal grazing, strict control of stocking rates, or intensive management plans. Also, an AUM allocated to burros is not equivalent to an AUM allocated to cattle because of differences in behavior, forage preference, and ability to navigate different types of terrain. Because of the high recruitment rates, adaptability, and competitive ability of feral burros, and because of the difficulty to adequately manage these animals, allotments with burro populations may still suffer negative to highly negative impacts on vegetation regardless of the presence or absence of livestock grazing.

In the Protection Alternative, burros would be reduced to and maintained at 3,830 animals, while horses would be reduced to 356 animals. This would require 50,232 AUMs of forage. This could impact 30 UPAs and 70 Rare, Threatened, or Endangered plant species.

The Balanced Alternative would maintain 47,196 AUMs for reduced herds totalling 3,602 burros and 331 horses. This could impact 27 UPAs and 62 Rare, Threatened, or Endangered plant species.

The impact evaluations assume full compliance with and implementation of multiple use class guidelines and therefore should be considered "best case" analyses. The following table summarizes the impacts of the Wild Horse and Burro Element on vegetation by Herd Management Area.

Table PE - 22

IMPACTS OF THE WILD HORSES AND BURROS ELEMENT ON VEGETATION

Herd Management Area	No Action Alternative	Protection Alternative	Balanced Alternative	Use Alternative
Piper Mountain	●	●	●	●
Saline Valley	●	●	●	●
Hunter Mountain	●	○	○	○
Sand Spring / Last Chance	●	◑	◑	◑
Lee Flat	◑	◑	◑	◑
Centennial Valley	◑	○	○	⦶
Darwin	◑	◑	◑	◑
Towne Pass	●	⦶	⦶	⦶
Panamint Mountains	●	○	○	○
Slate Range	◑	◑	◑	◑
Trona	●	◑	◑	◑
Coso Basin	◑	⦶	⦶	⦶
Chicago Valley	◑	◑	◑	◑
Pilot Knob	●	●	●	●
Slocum	●	●	●	●
Kramer	◑	⊕	⊕	⊕
Summit Pass	●	●	●	●
Ord Mountain	◑	◑	○	⦶
Cave Mountain	◑	◑	◑	◑
Morongo	◑	○	○	○
Clark Mountain	●	◑	◑	◑
Indian Spring	●	◑	◑	○
Granite Mountain	◑	◑	◑	◑
Providence Mountains	●	●	●	◑
Woods / Hackberry	◑	◑	◑	○
Marl Spring	◑	◑	○	⦶
Cut Spring	●	◑	◑	○
Piute Mountain	◑	○	⦶	⦶
Dead Mountains	◑	◑	◑	◑
Chemehuevi	●	◑	◑	◑
Palm Canyon	◑	⦶	⦶	⦶
Coyote Canyon	◑	⊕	⊕	⊕
Chuckwalla	●	●	●	●
Chocolate Mountains	◑	⊕	⊕	⊕
Milipitas Wash	◑	⊕	⊕	⊕
Picacho	●	●	●	●
Ash Meadows	◑	◑	◑	◑
Overall Rating	●	◑	◑	◑

■ On Wildlife. Horse and burro numbers under the No Action Alternative would remain at 1979 levels; maintenance of the population at this level probably would not be possible given current staffing and funding levels. If the targeted control at 1979 levels cannot be attained, burro populations would continue to increase; increases may be in the vicinity of 15 percent per year as suggested by various field studies. Horse numbers would probably also increase at a similar rate.

Removal of the proposed numbers of wild horses and burros would have a positive impact on wildlife, relative to the current situation. Approximately 60 percent of the wild horses and burros would be removed under the action alternatives.

Comparisons of the impacts under the three action alternatives indicate that the Protection Alternative would be less positive than the Balanced or Use Alternatives, with proportions of horses and burros removed of 56, 59, and 62 percent, respectively. This trend is the reverse of most of the other elements where the Use Alternative has the most severe impact on wildlife. There is a lack of any substantial differences in reduction of horse and burro numbers under the three action alternatives (see the following text table PE-23). Although removals have a positive effect on wildlife, many herd management areas are to be maintained with relatively high numbers. This problem, along with the following negative aspects of the burro management program, still impact wildlife in a negative manner.

These predictions are only valid if the estimate of burro numbers is accurate.

Table PE- 23

WILD HORSE AND BURRO NUMBERS AND REDUCTIONS OVER THE FOUR ALTERNATIVES

	No Action			Protection			Balanced			Use		
	Horses	Burros	Total	Horses	Burros	Total	Horses	Burros	Total	Horses	Burros	Total
Projected Number of Animals	746	8788	9534	356	3820	4176	331	3602	3933	311	3313	3624
Percent Reduction to Projected Number	---	----	----	52	56	56	56	59	59	58	62	62
Yearly Removal[a] (assume 15% increase)	112	1318	1430	53	573	626	50	540	590	47	497	544

[a] The number which must be removed yearly to maintain numbers at preferred numbers following initial reduction

Wildlife are not allocated forage directly under any alternative, i.e., the wild horse and burro element does not specify actual forage allocation for wildlife in areas which do not overlap with grazing allotments.

Wildlife are directly allocated forage in areas where wild horse and burro management areas overlap with grazing allotments. However, only about 40 percent of the wild horse and burro management areas are within grazing allotments. Wild horse and burro management area boundaries are fluid and change in size with the movement of the horses and burros. Thus, the areas occupied by the management areas are estimates and may fluctuate widely. The effects of no direct allocation of forage for wildlife would range from negative to highly positive depending on the number of burros relative to the carrying capacity in the herd management areas. However, if the wild horses and burros are allocated 50 percent of the new growth of perennial forage, wildlife would receive negative impacts. Numbers of potentially competing species, such as Desert Tortoise and Bighorn Sheep, would decline under such a management regime. All alternatives assume burro removal to the extent given in the above table (PE-23).

Burro grazing would continue on a year-round basis, so wildlife would receive no respite from these impacts. Species such as the Desert Tortoise and Mohave Ground Squirrel would continue to decline.

Under the No Action Alternative, wildlife and their habitats would receive highly negative impacts. The following table (PE-25) indicates the distribution of impacts across the wild horse and burro management areas.

Table PE-25

DISTRIBUTION OF IMPACTS OVER 37 HERD MANAGEMENT AREAS (NO ACTION)

Severity of Impacts	Highly Negative	Negative	No Substantial Impact	Positive	Highly Positive
Number of Herd Management Areas	31	4	2	0	0

Burros and horses would be managed at levels estimated to be in existence in 1979 within all herd management areas. These levels generally exceed levels which can be supported without degradation of the range. Populations of horses and burros are not static. If excess animals are not removed, continued expansion of the range and growth of populations would occur, thus degrading the wildlife habitat still further.

Currently, herd management areas are being grazed excessively, resulting in the range condition and trend information given in the table PE-24 below.

Table PE-24

RANGE CONDITION AND TREND OF HERD MANAGEMENT AREAS[a]
(Information taken from Wild Horse and Burro Element)[b]

	Condition of Herd Concentration Area					Condition of Herd Range				
	Excellent	Good	Fair	Poor	Total	Excellent	Good	Fair	Poor	Total
Improving	--	--	1	--	1	--	--	1	--	1
Stable	--	4[c]	5	--	9	--	7	19	--	26
Declining	--	--	18	5	23	--	--	3	3	6
Total	--	4	24	5	33	--	7	23	3	33

a) 4 management areas were not rated.
b) When the condition was considered to be a combination of two conditions, such as Good/Fair, the lower value was used in the analysis.
c) Number of herd management areas.

Of the 33 concentration areas, 88 percent are in fair or poor condition, and 70 percent are declining in trend. Of the 33 ranges, 79 percent are in fair or poor condition, and 18 percent are declining in trend. Under the No Action Alternative, conditions would continue to decline; wildlife would receive severe negative impacts. Under all action alternatives, conditions would continue to decline, but at a reduced rate because of the reduced numbers of burros compared to the No Action Alternative.

Wildlife would be impacted negatively under any of the three action alternatives. The following table (PE-26) indicates the distribution of impacts across the wild horse and burro management areas. It is clear that the Use Alternative in this element is the most beneficial to wildlife as is evidenced from the greater number of management areas with no substantial impacts (8). The Balanced Alternative is slightly better than the Protection Alternative as is evidenced by the numbers of management areas with no substantial impacts, 5 and 4 areas, respectively.

Table PE-26

DISTRIBUTION OF IMPACTS ON WILDLIFE OVER 37 HERD MANAGEMENT AREAS (PROTECTED, BALANCED, USE)[a]

Severity of Impacts	Highly Negative	Negative	No Substantial Impact Over 1979 Level	Positive	Highly Positive
Protection	14	13	4	1	5
Balanced	13	13	5	1	5
Use	11	12	8	1	5

[a] Figures are numbers of Herd Management Areas

When considering all of the impacts on wildlife, the three action alternatives are better for wildlife compared to the No Action Alternative. However, the impacts on wildlife will still be negative as the foregoing discussion demonstrates. Table PE-27 illustrates the level of impacts upon wildlife within each wild horse and burro management area.

On Wilderness. Under the No Action Alternative, wild horses and burro use would continue to degrade wilderness values and opportunities within their ranges throughout the CDCA. There would be no significant impact to wilderness values in designated wilderness areas as a result of any of the other alternatives. Ecological features which contribute to wilderness values within designated wilderness would be adequately protected under all alternatives.

On General Recreation. No adverse impact to other recreational opportunities would be expected as a result of wild horse and burro management in all alternatives. Some positive impacts to hunting opportunities would occur as a result of wild horse and burro management, as these animals' competition with game species for food and water would decrease.

Table PE - 27

IMPACTS OF THE WILD HORSE AND BURRO ELEMENT ON WILDLIFE BY HERD MANAGEMENT AREA

	Herd Managent Area	No Action Alternative	Protection Alternative	Balanced Alternative	Use Alternative
1)	Piper Mountain	●	●	●	●
2)	Saline Valley	●	●	●	●
3)	Hunter Mountain	●	◑	◑	◑
4)	Sand Spring / Last Chance	●	●	●	●
5)	Lee Flat	◑	◑	◑	◑
6)	Centennial Valley	●	◑	◑	○
7)	Darwin	●	●	●	●
8)	Towne Pass	●	⊕	⊕	⊕
9)	Panamint Mountains	●	⊕	⊕	⊕
10)	Slate Range	●	●	●	●
11)	Trona	●	●	●	●
12)	Coso Basin	●	○	○	○
13)	Chicago Valley	◑	◑	◑	◑
14)	Pilot Knob	●	●	●	●
15)	Slocum	●	●	●	●
16)	Kramer	○	⊕	⊕	⊕
17)	Summit Pass	●	●	●	●
18)	Ord Mountain	●	●	◑	○
19)	Cave Mountain	◑	○	○	○
20)	Morongo	◑	○	○	○
21)	Clark Mountain	●	◑	◑	◑
22)	Indian Spring	●	◑	◑	◑
23)	Granite Mountain	●	◑	◑	◑
24)	Providence Mountains	●	●	●	◑
25)	Woods / Hackberry	●	◑	◑	◑
26)	Marl Spring	●	◑	◑	○
27)	Cut Spring	●	◑	◑	◑
28)	Piute Mountain	●	◑	○	○
29)	Dead Mountains	●	◑	◑	◑
30)	Chemehuevi	●	◑	◑	◑
31)	Palm Canyon	○	○	○	○
32)	Coyote Canyon	●	⦶	⦶	⦶
33)	Chuckwalla	●	●	●	●
34)	Chocolate Mountains	●	⊕	⊕	⊕
35)	Milipitas Wash	●	⊕	⊕	⊕
36)	Picacho	●	●	●	●
37)	Ash Meadows	●	●	●	◑

■ On Cultural and Native American Resources. Wild horses and burros adversely affect a wide spectrum of cultural and Native American resources and values. The specific impact to these resources is dependent on a number of factors. Severity of impact is determined by: 1) the type of resource impacted, 2) the concentration of animals, 3) the season of use, 4) the type of natural environment, and 5) the extent, degree, and type of previous impacts (if any).

Although the general profile of impacts from wild horses and burros are similar to those discussed in the Livestock Grazing Element, there are important differences in the specific effects of these free-ranging herd animals on cultural and Native American resources. The areas of herd activity and herd density frequently vary substantially from the patterns of use associated with domestic livestock.

The impacts from these animals to cultural resources have been extensively studied on public lands in the California desert. The impacts identified in a study by Lyneis and Weide (1979) include: the trampling and cutting of trails in the vicinity of springs and seeps, dust wallowing, rubbing against surfaces which contain rock art elements, modification of soil, and the introduction of new pollens to rock shelters. Euler (1977) estimated that over one-half of the cultural resource sites in one study area (Grant Canyon National Park) had been damaged by burros, and 25 percent of such impacted sites had been completely destroyed.

Wild horse and burro impacts to soils also modify and degrade elements of the natural environment which continue to play a role in the economy and religious life of Native Americans. Many Native Americans have identified wild horses and burros as a serious impacting force on prehistoric and historic sites of cultural importance, as well as a primary factor in the ongoing deterioration of naturally occurring flora and fauna important to the continuance of traditional lifestyle. This widespread destruction of vegetation and indigenous plant communities has been confirmed by Lyneis and Weide (1979).

Herd management activities, such as the construction of corrals, round-ups, or eradication programs, also adversely impact cultural resources and values. However, these activities generally have short range and local impacts and are assessed to have a positive overall impact to cultural resources.

In general, the lower the population levels of wild horses and burros, the less will be the impact to cultural and Native American resources and values. Although the correlation between impact to cultural resources and herd density and distribution varies somewhat between herd management areas, lower levels of impact to cultural and Native American resources and values from burros can be expected under the Use Alternative. Increasingly higher levels of impact may be anticipated under the Balanced and Protection Alternatives, respectively. This is the reverse of the situation for most resources in the other elements.

■ On Wild Horses and Burros. Impacts on wild horses and burros by the decisions of this element will be viewed primarily from the perspective of how the decisions affect the number of animals and the number of herd management areas (HMAs), as well as the vigor and well-being of the wild horse and burro populations.

Under the No Action Alternative the impacts would be negative due to the overstocked condition of several HMAs. Extended droughts would severely affect the vigor and well-being of the populations in northern portions of the CDCA at their present populational levels. The negative impact would be partially compensated in the less dense populations to the south where they are closer to carrying capacity. As noted in the wildlife impact treatment, it is unlikely that 1979 level populations can be maintained under current funding, staffing, and control methods.

The Protection Alternative of the Wild Horse and Burro Element would negatively impact burros. More than half of the burros (4,956), would be removed, and five of the HMAs would be eliminated. Removal of the burros would be for the purpose of bringing the stocking levels into line with carrying capacities. Approximately 3,000 burros would be removed from HMAs that overlap grazing allotments; 2,000 would be removed from HMAs outside of grazing allotments. The majority of those outside grazing allotments would come from the five HMAs slated for elimination, especially from the three HMAs that overlap the boundary of Death Valley National Monument. The Park Service has a policy of excluding exotic species from parks and monuments.

The negative impact on burros from the Balanced Alternative would result from removal of approximatey 60 percent of the burros desertwide, including complete elimination of five HMAs. Removal of the burros would be to bring the populations into line with the carrying capacity of the range. Approximately 3,500 burros would be removed from HMAs that overlap grazing allotments. The remaining reductions would be essentially the same as in the Protection Alternative.

Approximately 62 percent of the burros in the CDCA (5,500) would be removed under the Use Alternative. Five HMAs would be eliminated. All reductions are planned to bring the populations into line with the carrying capacity of the range. Approximately 3,700 burros would be removed from HMAs that overlap grazing allotments. The remaining reductions would be similar to those in the Protection Alternative.

Under the No Grazing Subalternative, burros would be impacted highly positively. Considerable forage now being used by livestock would be available to burros and wild horses.

Wild horses would be positively impacted under the No Action Alternative since they compete well for forage and could maintain themselves.

The Protection Alternative would negatively impact the wild horse population. About half (390 out of 746) of the horses and one HMA would be eliminated. Most of the removal would come from HMAs that overlap grazing allotments. The HMA to be eliminated overlaps Anza-Borrego State Park.

Under the Balanced Alternative negative impacts would involve reduction of the wild horse population by approximately 56 percent (405 animals). One HMA would be eliminated as in the Protection Alternative, but most of the reduction would occur in HMAs that overlap grazing allotments.

Under the Use Alternative the wild horse population would be reduced by approximately 62 percent (435 animals). The circumstances are essentially as given for the Protection and Balanced Alternatives. The health and vigor of the populations would likely be favored by the range improvements provided for in the Livestock Grazing Element in the Protection, Balanced, and Use Alternatives.

Table PE - 28

SUMMARY OF WILDLIFE ELEMENT IMPACTS

Resource	No Action Alternative	Protection Alternative	Balanced Alternative	Use Alternative
Air	○	○	○	○
Water	◑	⦶	⦶	⦶
Soil	○	○	○	○
Vegetation	○	○	○	○
Wildlife	◑	⦶	◑	●
Cultural	○	⦶	⦶	○
Native American	●	⦶	⦶	○
Wilderness	◑	⦶	○	○
Visual	○	○	○	○
General Recreation	○	○	○	○
Motorized Vehicle	○	○	○	○
Grazing	○	◑	◑	○
Burros	○	◑	◑	◑
Social Factors	○	◑	○	⦶
Economic Factors	○	◑	◑	○

• LEGEND •

○ No significant impact
⦶ Positive impact
⊕ Highly positive impact
◑ Negative Impact
● Highly negative impact

Note: The No Action Alternative assumes present BLM management, actual livestock use, and that wild horse and burro numbers will remain unchanged over the next 20 years (see page 31 of the plan for a more complete explanation).

The Protection, Balanced, and Use Alternative columns indicate impacts anticipated in the next 20 years when an alternative is compared against existing 1980 conditions.

IMPACTS OF THE WILDLIFE ELEMENT

The significant impacts that would occur with implementation of this element are as follows:

* * *

★On Wildlife. Under the No Action Alternative, actions which are initiated to maintain or enhance wildlife species and habitats would be handled on a case-by-case basis. Generally, there have been few special programs to maintain or enhance wildlife resources. As such, wildlife management is extremely variable and depends upon decisions of Area and District Managers. Positive actions undertaken towards maintenance or enhancement of species and habitats include the initiated or completed Habitat Management Plans for Peninsular Bighorn, Desert Slender Salamander, and Desert Tortoise Natural Area, and designation of 53 areas for protective management of wildlife resources (many through existing Management Framework Plans). In spite of some positive efforts, the No Action Alternative would have an overall negative impact of wildlife resources because of the lack of a consistent management plan designed to deal with these resources on a desertwide basis. The absence of a desertwide plan would result in continued declines in habitat condition, in population stability and range size, leading to losses of crucial habitat, severe population fragmentation, and local and widespread extirpations.

The impacts of the Wildlife Element on desertwide wildlife resources in the Protection, Balanced and Use Alternatives are dependent upon distribution of multiple use classes in each alternative, since management guidelines vary with class designation. Active management plans with positive impacts are compatible with Class C and L guidelines, but are generally incompatible under Class M and Class I constraints. Negative impacts are expected in classes M and I, including fragmentation of populations and habitats; declines in local habitat quality, wildlife population densities and range size; and possible extirpations.

Management proposals under the Protection Alternative would have a positive impact overall. There are positive impacts on State and federally listed, sensitive and significant species and on critical, crucial, or unique habitats occurring within 92 percent of the CDCA. Wildlife Habitat Management Plans covering 3.6 million acres, Wilderness Management Plans for one million acres, and ACEC Management Prescriptions for 251,000 acres are proposed. Management proposals also include reintroduction of Pronghorn and California Bighorn Sheep into historical ranges (where feasible), enhancement of game populations, and establishment of 47 areas designed for protective management of wildlife resources. However, these actions do not necessarily provide sufficient positive benefits to prevent decline and loss of some important wildlife resources. Severe habitat degradation, local population declines and extirpation would be expected within classes M and I in 6 percent of the CDCA.

The Balanced Alternative would have negative impacts overall. Fifty-eight percent of the CDCA is in Classes C and L under this alternative and thus is eligible for active wildlife management. Positive impacts are anticipated from 2 million acres of Habitat Management Plans, 686,000 acres of Wilderness Management Plans, 251,000 acres of ACEC Management Prescriptions, and 47 areas of special wildlife importance. Positive impacts are offset by the high percentage (41 percent) of CDCA lands in classes M and I, where negative to highly negative impacts would occur.

The Use Alternative would have highly negative impacts on desertwide wildlife resources. Only 22 percent of the CDCA is in classes C and L where positive management actions would occur. Positive actions include Habitat Management Plans covering 669,000 acres, Wilderness Management Plans covering 430,000 acres, ACEC Management Prescriptions covering 251,000 acres, and 40 areas of special wildlife importance. However, these actions are offset by the high percentage of the CDCA in classes M and I (75.5 percent) and by the small and fragmented size of many of the Habitat Management Plan areas. Species residing on valley floors and plains would receive much greater negative impacts than more montane species and habitats, which tend to fall into the more protective land use classes. The Mohave Ground Squirrel and Desert Tortoise would be especially negative impacted under this and the Balanced Alternatives.

★ On Cultural Resources and Native American Values. In general, the Wildlife Element would complement the protection and preservation of cultural resources and Native American values. In only a few situations would the development or management activities of this element adversely impact cultural resources and values. In some cases the seasonal closure of roads would have an adverse impact on scientific research activities and/or use of resources by traditional Native Americans. Although a few cases of potential conflict exist, the concerns of Native People for conserving and prolonging traditionally significant fauna complement the guidelines of the Wildlife Element. Where trapping or other related wildlife activities ensue, some indirect impacts may also be anticipated, such as illegal collection or vandalism.

The Protection Alternative guidelines provide the greatest overall protection for cultural resources. Species and habitat protection under this alternative will incorporate approximately 6,937,000 acres. The areal coverage of these guidelines would be reduced to include 4,689,000 acres under the Balanced Alternative and 1,971,000 acres under the Use Alternative.

★ On Wilderness. The No Action Alternative of the Wildlife Element would result in continued degradation of wildlife habitat and populations which contribute to wilderness values throughout the CDCA. Wildlife resources which contribute to wilderness values and opportunities would be fully protected within designated wilderness areas in all other alternatives. There would be no adverse impact from any of the alternatives on wilderness values or opportunities within designated wilderness areas.

★ On General Recreation. The only major difference between the action alternatives would be the number of special habitat areas managed. The techniques for each area would remain essentially the same under each alternative, with the exception of wilderness designation in Class C. The Protection Alternative would contain the largest number of special areas, the Use Alternative the fewest.

The impacts of the No Action Alternative would be assessed on a case-by-case basis. In general, the presence of wildlife and improvements in wildlife habitat add to the quality of the recreational experience in an area. Protection of desert wildlife would be considered a positive benefit by a majority of desert visitors.

Closures of areas to vehicular access, either seasonal or permanent, would have adverse impacts on access-oriented recreational opportunities, but this would be beneficial to primitive experience seeking recreationists who would be attempting to avoid motorized recreationists. Other recreational opportunities, such as hunting, would also benefit from better wildlife habitat management.

★ On Vehicle-oriented Recreation. The No Action Alternative would have no significant impact on vehicle-oriented recreation. There would be potential for a slight reduction in vehicle-oriented opportunities and experiences where Desert Tortoise habitat conflicts with competitive use.

The Protection, Balanced, and Use Alternatives of the wildlife element would have no significant impact on vehicle-oriented recreation. Management actions proposed in these alternatives, (Habitat Management Plans, Special Areas, and Road Designation Restrictions) would be primarily within multiple use classes C and L where vehicle use is already limited or restricted. Road designations within Class L would be made based on all known resource values, including wildlife. Limiting vehicle access to protect wildlife habitat would impact vehicle-oriented experiences since it would not be possible to use vehicles as means to view wildlife in these areas.

★ On Socioeconomic Values. Under the No Action Alternative, protection of Desert Tortoise habitat would prevent development of energy potential in the vicinity of Ivanpah Valley. This area has the greatest oil and gas potential in the desert as indicated by the geological characteristics, existing oil and gas lease applications, traces of petroleum in exploratory wells, and oil production from similar areas in Nevada. This area is also one of the more desireable power plant siting regions and has received approval from the California Energy Commission. Sufficient other siting regions would be available elsewhere in the CDCA. Livestock grazing would continue essentially unchanged under this alternative.

Under the Protection Alternative impacts on energy development in the Ivanpah Valley would be the same as under the No Action Alternative. Also, under this alternative, 29 of 55 current livestock allotments would be significantly impacted by management options to protect wildlife habitat:

- 7 allotments with livestock forage reduced by 20 - 67 percent;
- 8 allotments with livestock turnout dates delayed by 30 days on ephemeral range; and
- 18 allotments with livestock turnout dates delayed by 2 - 3 weeks most years.

Most of the above impacts would result from measures proposed to protect Desert Tortoise habitat. The impacts would fall almost entirely on sheep operators.

Under the Balanced Alternative, 25 livestock allotments would suffer significant impacts from constraints proposed to protect wildlife:

- 7 allotments would have livestock forage reductions ranging from 15 to 67 percent, primarily in poor forage growth years (most reductions would be less than under the Protection Alternative);
- 7 allotments would have livestock turnout dates delayed by 30 days on ephemeral range; and
- 19 allotments would have livestock turnout dates delayed by 2 - 3 weeks most years.

Again, most of these impacts result from protection of Desert Tortoise habitat and are incurred by sheep operators.

Under the Use Alternative, oil and gas leasing would be permitted in the Ivanpah Valley, and power site development could be undertaken under Class M management. Twenty-five livestock grazing allotments would be affected by constraints imposed to protect wildlife. The impacts from these constraints would be almost the same as under the Balanced Alternative.

Table PE - 29

SUMMARY OF LAND TENURE ELEMENT IMPACTS

Resource	No Action Alternative	Protection Alternative	Balanced Alternative	Use Alternative
Air	○	○	○	○
Water	○	○	○	○
Soil	○	○	○	○
Vegetation	○	○	○	○
Wildlife	○	○	◐	●
Cultural	○	⊕	○	●
Native American	●	⦶	○	●
Wilderness	○	⊕	⦶	○
Visual	◐	⊕	⊕	⦶
General Recreation	⦶	⊕	⊕	⊕
Motorized Vehicle	○	⦶	⦶	⊕
Grazing	○	○	○	○
Burros	○	○	○	○
Social Factors	○	○	○	○
Economic Factors	○	○	○	○

• LEGEND •

○ No significant impact
⦶ Positive impact
⊕ Highly positive impact
◐ Negative Impact
● Highly negative impact

Note: The No Action Alternative assumes present BLM management, actual livestock use, and that wild horse and burro numbers will remain unchanged over the next 20 years (see page 31 of the plan for a more complete explanation).

The Protection, Balanced, and Use Alternative columns indicate impacts anticipated in the next 20 years when an alternative is compared against existing 1980 conditions.

IMPACTS OF THE LAND TENURE ADJUSTMENT ELEMENT

Significant impacts would result from this element when lands are transferred or acquired. The element does not indicate the purpose to which lands would be put once land tenure adjustments were accomplished. Impacts to each resource are potential, based on the values contained in areas involved.

* * *

◆On Vegetation. In the No Action Alternative, no lands would be disposed of and hence there would be no impacts on vegetation. The Protection Alternative proposes to dispose of 30,080 acres affecting 5 unique plant assemblages (UPAs) and Rare, Threatened, or Endangered plant species. Over 860 AUMs would be lost to livestock use, as would an undetermined amount of ephemeral forage.

The same 5 UPAs would be impacted in the Balanced Alternative. About 38,400 acres would be disposed of. One Rare, Threatened, or Endangered plant species would potentially be impacted, and over 2,100 AUMs of perennial forage and an undetermined amount of ephemeral forage would be lost for livestock use. In the Use Alternative, 6 UPAs within 32,640 acres of disposal land would potentially be impacted. Two Rare, Threatened, or Endangered plant species would be affected, and 1,861 AUMs of perennial forage and an unknown amount of ephemeral forage might not be available for livestock use.

◆On Wildlife. There is no desertwide species or ecosystems approach to land acquisitions or disposal in the No Action Alternative. Transfer of lands would be considered on a case-by-case basis. The impact of land acquisition on wildlife species and habitats will vary with area, location, and size.

The impact of land disposal will also vary with these same factors, but will generally be detrimental because of resultant development or intensive use. Individual environmental impact statements accompanying such land transfers would have difficulty addressing the importance of an individual area on a desertwide basis. Overall the lack of a program to acquire lands in an organized manner in the No Action Alternative would have a negative impact on wildlife.

Differences between alternatives reflect changes in the amount of land area placed in each of the four multiple use classes. The action alternatives include an active acquisition program which would be beneficial to wildlife but generally would not reflect specific wildlife requirements.

Acquisition of lands for ACECs, Wilderness (C), and Limited Use Class (L) would generally be beneficial to wildlife by protecting habitat. Acquisition of lands for Class I would not be beneficial for wildlife since these areas would be lost as high quality wildlife habitat due to excessive ORV use and mining activity. Elimination of conflict between public and private lands around communities would not be beneficial to wildlife, as many areas would be lost for sensitive and significant species because of urbanization and agriculture. Disposal of "islands" of public land surrounded by private land would have insignificant or slightly negative impacts in most cases. Negative impacts would arise if essential habitat is disposed, whereas little impact would occur if disposed areas contain poor quality habitat.

The greatest area of land would be acquired under the Protection Alternative. Since that land generally would be placed in Class C or L, impacts would be positive.

The Balanced Alternative would have greater negative impacts on wildlife than the Protection Alternative. Compared to the Protection Alternative fewer lands would be acquired, and, of these, a greater proportion would be acquired for motorized vehicle open areas (Class I) rather than Class C or L.

Under the Use Alternative, the least amount of land would be acquired and most would be acquired for vehicle open areas rather than classes C and L. This would have highly negative impacts on wildlife in those areas where unrestricted motorized vehicle use takes place.

Specific areas for disposal and their impacts on key wildlife species are shown in the following table. Many of the areas to be disposed are small and surrounded by private lands; hence, species residing there probably would decline rapidly. Ranges of species which would be severely impacted by disposal under all alternatives include: Desert Pupfish, Desert Tortoise, Coachella Valley Fringe-toed Lizard, Flat-tailed Horned Lizard, Yellow-billed Cuckoo, Vermilion Flycatcher, and Summer Tanager.

Combining the two components of this element, acquisition of so much C and L Class lands under the Protection Alternative may balance the losses through disposal, whereas losses would outweigh the acquisitions in the Balanced Alternative and would severely outweigh the acquisitions in the Use Alternative.

Table PE-30

RELATIVE IMPACTS OF THE LAND TENURE ELEMENT ON 15 WILDLIFE SPECIES[a]

	Protection		Balanced		Use	
	Lands Acquired	Lands Disposed	Lands Acquired	Lands Disposed	Lands Acquired	Lands Disposed
Mojave Chub	⊕	○	⊕	○	⊕	○
Desert Pupfish	○	●	○	●	○	●
Amargosa River Pupfish	⊕	○	⦶	◑	○	◑
Nevada Speckled Dace	⊕	○	⦶	◑	○	◑
Desert Tortoise	⊕	●	⦶	●	○	●
Flat-tailed Horned Lizard	⊕	●	⦶	●	○	●
Coachella Valley Fringe-toed Lizard	⊕	●	⦶	●	⦶	●
Golden Eagle	⊕	◑	⦶	◑	⦶	◑
Prairie Falcon	⊕	◑	⦶	◑	○	◑
Yellow-billed Cuckoo	⊕	●	⦶	●	⦶	●
Vermilion Flycatcher	⊕	●	⦶	●	⦶	●
Summer Tanager	⊕	●	⦶	●	⦶	●
Mojave Ground Squirrel	⊕	◑	⦶	◑	⦶	◑
Desert Bighorn Sheep	⊕	○	⦶	○	⦶	○
Peninsular Bighorn Sheep	⊕	○	⦶	○	⦶	○

a) No Action impacts not listed, since each situation is handled on a case-by-case basis. Impacts range from highly negative to highly positive.

• LEGEND •

○ No impact

⦶ Positive impact

⊕ Highly positive impact

◑ Negative Impact

● Highly negative impact

◆ On Cultural and Native American Resources. The transfer of lands to groups or individuals for the purpose of resource conservation would be highly advantageous as a means of contributing to the protection and preservation of cultural and Native American resources and values. In all cases, the impact will be determined by the difference between management of the proposed transfer areas under BLM jurisdiction in comparison to the anticipated management of the land should transfer (either acquisition or divestment) occur. The acquisition of private properties for the purpose of consumptive use (eg., ORV open areas), could, for example, lead to damage or destruction to the cultural resources which might not occur if the land were maintained in other than government ownership and jurisdiction. Acquisition, if specifically for the purposes of preservation, would conversely lead to the enhancement of resource protection and preservation under BLM management.

The greatest potential for negative impact is attributable to the No Action Alternative since land tenure adjustment would occur on an ad hoc basis. In comparison, the large amount of land to be acquired for protection, and the relatively small proportion of land anticipated for acquisition for consumptive use, indicates that the overall negative impact would be minimal under the Protection Alternative.

It is anticipated that the pattern and severity of impacts and the adverse consequences of land transfer would increase in the Balanced and Use Alternatives. This would be the result of several factors. First, it may not be possible to mitigate these sites prior to the proposed transfer. This would mean the probable and permanent loss of data. Second, impacts might occur after transfer which would not have occurred under BLM management. Where buried cultural materials exist it may be expected that many such sites would be destroyed should transfer occur. Third, in many cases potential transfer properties will contain rare or unique cultural and/or Native American resources and values. Potential loss of such values would be increased as the amount of land disposed of increases in the various alternatives.

◆ On Wilderness. The No Action Alternative would have no impact on wilderness values.

The Protection, Balanced, and Use Alternatives would have significant positive impacts on wilderness values and opportunities within designated wilderness areas. Up to 764,000, 272,000, and 26,000 acres of lands may be acquired through exchanges or purchase under each of these alternatives, respectively, to enhance wilderness values and opportunities and facilitate wilderness management.

◆ On General Recreation. Land acquisitions designed to consolidate Federal ownership in wilderness areas, ACECs, and ORV open areas would benefit the recreational opportunities and experiences available in the CDCA. With no overall land tenure adjustment program, No Action would have the least positive impacts. The Protection Alternative proposes the most land acquisitions, primarily for protection purposes. This would generally benefit all recreation except motorized vehicle use. The Balanced and Use Alternatives propose lesser amounts of acquisition and greater amounts of disposal.

Areas for disposal would result in a loss of recreational opportunities and experiences unless subsequent ownership and management continued prior use.

◆ On Vehicle-oriented Recreation. Motorized vehicle impacts would be positive, though the No Action Alternative would be least positive.

The Protection Alternative provides for acquisition of 2.2 million acres of private lands. Most of these lands are located within wilderness areas and would therefore have no significant impact. However, land would be acquired to consolidate ORV open areas creating a slightly positive impact on vehicle-oriented recreation. The Balanced and Use Alternatives would produce positive impacts on vehicle-oriented recreation in proportion to the amount of land acquired for ORV purposes.

◆ On Socioeconomic Values. With the exception of Inyo County, all of the counties in the CDCA receive ten cents per acre in lieu of taxes on public land each year. This is equivalent to the taxes paid on land valued at about $4 per acre. Since most public land values are considerably greater, the counties would receive more revenue if the land were in private ownership and regular property taxes assessed upon it.

Inyo County receives seventy-five cents per acre in lieu of taxes, which is equivalent to its tax revenues on a land value of about $35 per acre. Again, most land is worth more than that and the county would increase its receipts by reducing its public land acreage.

If lands are exchanged within a county on an equal value basis, the county would generally increase its total revenues, since lands slated for acquisition are generally lower value than lands slated for disposal. In-lieu-of-taxes payments would increase because they are based on acreage, whereas property taxes are based on value. Total assessed property would remain constant in this case.

C-3
Summary of Impacts of ACEC's

Unlike the plan alternatives, ACEC management requirements are constant for all action alternatives. Environmental impact analysis was completed for each ACEC, stressing significant impacts and significant losses of other resource uses.

1) EUREKA VALLEY DUNES

Elimination of ORV use will prevent detrimental impacts to six species of endemic beetles. Protection will also be given to two federally listed endangered plants, undiscovered invertebrates, and to one of three populations of the Pallid Kangaroo Mouse known in the CDCA. Elimination of ORV use would end some of the most severe surface and subsurface disturbance of cultural resources. Establishing an interpretive station will increase dispersed recreation activities and may result in collection of artifacts or the inadvertent destruction of cultural features.

2) SALINE VALLEY / SALT LAKE / HUNTER CANYON

Controlling feral burro populaitons will eliminate severe adverse impacts to cultural sites, to one of the largest natural marshes (60 acres) in the CDCA, and to the highly productive mesquite habitat adjacent to the lake and marsh. Large reductions or complete removal of burros will allow these habitats to recover, thereby increasing vigor, cover, and value to wildlife. However, burro collection activities could result in damage to cultural sites due to inadvertent destruction by teams engaged in burro removal. Similarly, fence construction teams could adversely impact cultural sites.

Controlling visitor use will prevent the destruction of vegetation and soils by ORV use and wood cutting, and will reduce the likelihood of wildfire.

However, known deposits of mineral resources underlie virtually the entire ACEC. These include sand, sodium, tungsten, molybdenum, lithium, boron, bromine, and iodine. Limitations on access and surface disturbance will restrict future development of these resources.

3) DARWIN FALLS

One of the few large riparian areas with a large waterfall in the CDCA would be protected. A tamarisk control program would allow the oasis to retain native vegetation and prevent the degradation of faunal resources found in riparian habitats dominated by tamarisk. Control or elimination of feral burros would prevent habitat destruction and pollution of the water source, and could reduce the surface and subsurface deterioration of cultural sites. Elimination of ORVs would protect vegetation, soil, and cultural resources. There would be moderate increases in annuals and perennials.

Withdrawal from mining entry would reduce the opportunity for future exploration of a mining region which has produced zinc, lead, silver, and copper in the past.

4) BLACK SPRINGS

Repairing and enlarging the exclosure and moving the existing water trough will reduce impacts on cultural resources and enhance the value of this study area as a control in determining the effects of grazing on a riparian habitat.

5) FOSSIL FALLS

Continued protection of this 600 acre area would perpetuate preservation of a highly scenic and unique volcanic flow. Cultural resources, including house rings, petroglyphs, and other artifacts, would have continued protection. Aquisition of 80 acres of private land would increase the manageability of this ACEC .

6) INYO BROWN TOWHEE

The Inyo Brown Towhee, proposed for the BLM sensitive species list, breeds only in riparian habitat in the Argus Mountains. This ACEC includes 26 percent of its range. Control or elimination of feral burros would eliminate the primary cause of damaged riparian habitats. Acquisition of private lands would allow a comprehensive species management plan; cooperative management of water or acquisition of water rights would ensure the presence of moisture to support riparian vegetation. Camping, mining, and shooting restrictions would reduce or eliminate their adverse impacts on habitat quality. Deterioration of cultural sites would decrease.

7) PANAMINT VALLEY

The marsh, open water, and mesquite habitats in Panamint Valley are among the most important and rare wildlife habitats in the CDCA. Aquisition of private lands would allow consistent management of the entire area and would ensure that it would not be degraded by potential uses on private land. Constraints on camping, ORV use, and mining would prevent further deterioration of the habitat and allow recovery. Monitoring and controlling feral burro populations would prevent damage to fragile soils and destruction of vegetation. Management would protect cultural resources and improve activities such as birdwatching, nature study, and research.

8) PANAMINT CITY

Control of vehicle access through road closures and ranger patrol would reduce vandalism damage to such historic values as the remmants of the old silver smelter and other traces of the rich silver mining history that dates back to the 1873-76 life of this abandoned mining town. If acquisitions can be made of key historical areas in Panamint City on patented claims, a program of preservation and possible, reconstruction for public visitation could eventually develop. Rising silver prices could, however, lead to reworking of patented mines with attendant impact on cultural and natural values. Wildlife values, including Prairie Falcon foraging areas, Bighorn Sheep transient range, Mule Deer habitat, an isolated population of Juniper and riparian habitat, would also benefit from the cultural-historic preservation measures to the extent they can be implemented.

9) GREENWATER CANYON

ACEC designation would protect wildlife and cultural resources by preventing habitat and site deterioration due to ORV use, vandalism, and camping. However, prohibiting vehicle entry might reduce rockhounding use of the canyon and exclude visitors incapable of walking.

10) AMARGOSA CANYON

Continuing the ORV closure would prevent destruction of riparian areas. Acquistion of private lands would allow the entire area to be managed as an ACEC.

The present withdrawal ensures elimination of mining, mineral sales, and leasing. Its continuation would curtail future exploitation of an area which, while not a proven source of commercial minerals, may possess lithium, borate, and oil and gas deposits.

Recommendations would protect cultural resource sites by reducing or eliminating site destruction by vehicles and development.

11) KINGSTON MOUNTAINS

The Kingston Mountain range is an island of montane habitats surrounded by more typical desert scrub habitats. It supports one of three relict white fir forests in the CDCA, and it is the primary habitat for eleven bird species. The dominant habitat type is pinyon-juniper woodland, an uncommon habitat away from the Sierra Nevada, Transverse Mountains, and Peninsula Range transitions with the Mojave and Colorado deserts. Island refuges, such as the Kingston Mountains, are important for the study of interactions between Sierra Nevada, Great Basin, Sonoran Desert, and Colorado Desert biotic influences. The Kingston Mountains support approximately 30 Desert Bighorn Sheep and 100 percent of the range of the endemic Kingston Mountain Chipmunk. Reducing stocking levels or restricting grazing areas would reduce competition with Bighorn Sheep, allow range condition to return to a more natural state, and potentially allow Bighorn Sheep numbers to rise. Development of wildlife water sources and ensuring access to livestock waters would provide water needed by Bighorn Sheep, and permit them to increase their range into areas currently lacking springs. Desert Bighorn Sheep have been recommended for the BLM's sensitive species list. Closing the white fir forest to mineral entry would permanently protect this rare habitat. Monitoring burro populations would enable the BLM to detect rising levels that might begin to degrade wildlife habitat and reduce population levels, and then to take necessary corrective actions.

A reduction in human and animal intrusions would generally benefit cultural resources. The greatest potential impacts would result from the construction of guzzlers (particularly around springs), drift fences and barriers, and, to a lesser extent, cattle troughs.

The white fir forest would be closed to mining entry. This closure would eliminate future use of talc, iron, and other minerals that occur in the ACEC.

12) SALT SPRINGS

Salt Creek is one of the few flowing streams in the CDCA. It supports a large riparian/mesquite thicket habitat, one of the most productive, yet least common, wildlife habitats in the CDCA. A tremendous diversity of animals, especially birds, occurs on this ACEC. Eliminating ORV use would stop the continual disturbance of the creek and adjacent salt soils, allow existing vegetation to recover, and ensure that new trees and shrubs are established. Camping restrictions would reduce fire danger and habitat destruction caused by wood cutting. An aggressive salt cedar removal program would allow a natural vegetational cover to be reestablished. Cultural resources would generally benefit from management prescriptions, although fencing or signing of sites and increased public awareness might lead to increased attention, visitation, and, hence, vandalism. However, access limitations would restrict future exploration and development of a region with potential for minerals that are now in demand, including uranium, tin, zinc, and chromium.

13) CLARK MOUNTAIN

Clark Mountain is an island montane refuge surrounded by large expanses of desert scrub. It supports the largest of three relict white fir forests occurring in the CDCA and the greatest number of species associated with this habitat type. It is an extremely important ecotonal area where a number of desert habitats intermingle. It is a dynamic area undergoing natural change in species distribution. A herd of approximately 40 Desert Bighorn Sheep utilize the far eastern and southern area of Clark Mountain; the southern portion of the range would be in this ACEC, and a movement corridor exists between the areas at Keany Pass. In the white fir forest area, withdrawal from mineral entry and elimination of grazing would reduce, but not eliminate, future intrusions into this unique area. Its future usefulness for research and education would be retained.

Limiting construction activities along the powerline corridors to winter months would prevent disturbances to seasonal Desert Bighorn Sheep movement patterns. Establishing additional water sources for Bighorn Sheep would allow better distribution through the range and might allow the herd to enlarge. Controlling the rapidly expanding feral burro population would reduce competition with native wildlife at water sources, prevent serious decline in range condition, and reduce competition with Bighorn Sheep. Regulating future mining activities on the lower slopes to minimize road building would directly reduce habitat losses caused by mining activities, and would indirectly prevent deleterious effects by limiting visitor access points and reducing the potential for undesirable and uncontrollable ORV use.

Protection of the ecotones between plant communities would have beneficial effects on cultural resources as sites are often situated in these areas. Management prescriptions, such as withdrawal of areas from mineral entry, and mining and road construction limitations, would prevent diminution of the resource base. Preventing habitat degradation would decrease site damage due to erosion. However, construction of facilities might result in site damage.

Clark Mountain is one of the richest areas for metals in the CDCA. This region possesses areas of high potential for near surface silver mineralization and porphyry copper at depth. There has been past production of zinc, lead, copper, and gold. Impacts on developing these resources would be high as ACEC designation would eliminate mining on much of Clark Mountain proper.

14) MOUNTAIN PASS

Mining and vehicular restrictions would prevent damage to the large number of historic remains in the area. Construction of a parking lot would result in soil compaction and vegetation removal. Erosion may increase due to the presence of a foot trail, possibly damaging cultural sites. Sightseeing, hiking, education, and research opportunities would increase.

15) TRONA PINNACLES

Fencing all or part of the Trona Pinnacles National Landmark, the most outstanding United States example of calcium carbonate spire formations with location of a campground away from the pinnacles while placing a manned field contact station at the pinnacles site would provide protection from uncontrolled vehicular and foot access that is currently damaging the bases of the spires.

Construction of the campground, roads, and the field contact station would, however, adversely impact cultural resources both directly (if they are constructed near cultural sites) and indirectly (by drawing attention and use to the area, increasing collection, vandalism, and inadvertent destruction). Ranger patrol, closure to ORV use, and other restrictions would reduce these impacts.

The Trona Pinnacles also supports a Prairie Falcon eyrie and is within the Mohave Ground Squirrel range. Restricting vehicle access in the area, fencing, and providing either manned contact station or frequent ranger patrols would protect ground squirrel habitat from disturbances and decrease the potential for Prairie Falcon nest vandalism. However, activity at the campground or contact station could disturb nesting or feeding behavior if located too close or in the wrong areas.

16) BEDROCK SPRINGS

This ACEC is within the potential foraging areas of nearby Prairie Falcon and Golden Eagle eyries (being considered for the BLM's sensitive species list). The Mohave Ground Squirrel also occurs on this ACEC. Restricted visitor access and closure to ORV use would be generally beneficial to wildlife resources by reducing disturbances to habitat.

No negative impacts on cultural resources are anticipated other than those associated with increased visitor use. Rockhounding may decrease due to vehicle restrictions.

17) STEAM WELLS

ACEC designation would protect a well-known rock art complex from ongoing vandalism. Restricted ORV use and decreased vandalism would reduce disturbance to possible Mojave Ground Squirrel Habitat and potential foraging areas of nearby Prairie Falcon and Golden Eagle eyries. Protection may also increase educational and sightseeing use.

18) SQUAW SPRINGS

ACEC designation would protect a very sensitive and prolific archaeological resource from vandalism, assuming that the current level of protection is maintained. Controlled visitor use would reduce disturbances by vandals and ORVs to high density Desert Tortoise habitat, possible Mojave Ground Squirrel habitat, and potential Prairie Falcon and Golden Eagle foraging areas.

19) BLACK WATER WELL

Restriction of ORV activity would protect rare prehistoric sites, ranging from a large village to temporary camps and would also protect an historic watering site on the 20-Mule Team Road. However, increased public knowledge of this area could increase the chances of vandalism, because unrestricted vehicle entry to the sites would be allowed, even though only on existing roads. Restriction of ORV activity would reduce disturbances to possible Mojave Ground Squirrel habitat and potential Prairie Falcon and Golden Eagle foraging areas.

20) GOLDSTONE

Controlled access and elimination of ORV use would protect possible Mohave Ground Squirrel habitat and would prevent vandalism in this historic mining town.

21) BLACK MOUNTAIN

Increased public recognition of this area could increase visitation, which in turn could impact the surface cultural sites which surround the rock art. However, control of ORV use would protect high density Desert Tortoise habitat, possible Mojave Ground Squirrel habitat, and Prairie Falcon and Golden Eagle eyries and foraging areas.

22) HARPER DRY LAKE

Harper Lake is one of the few marsh habitats in the CDCA. It has the highest number of waterbird and marsh-associated species. Yuma Clapper Rails have been recorded here, and Bald Eagles have been observed in the winter; both species are on the Federal Endangered species lists. Many significant bird species regularly occur in the marsh, including Short-eared Owl, Marsh Hawk, and Snowy Plover. All three of these species are extremely uncommon breeding species in the CDCA. Monitoring water quality, pesticide levels, and irrigation practices on adjacent farm land would allow the BLM to detect and correct adverse actions. Coordination with local landowners might reduce undesirable changes. Eliminating grazing, ORV use, oil and gas leasing, and other habitat-disturbing uses would prevent water quality degradation. Habitat improvements would allow natural vegetation to reestablish and increase plant species diversity.

23) RAINBOW BASIN / OWL CANYON

Vehicle closure, mineral entry withdrawal, and ranger patrol would prevent destruction of fossil bones and fossil camel trackways by vandals or amateur fossil collectors. However, an active interpretive program could increase vandalism, collecting and inadvertent destruction of cultural resources by drawing more attention and visitors to the area.

24) IRON MOUNTAIN

Elimination of mining and ORV use and restricting vehicle access should protect this ACEC's archaeological sites from future destruction. However, increased public awareness of the area, the proximity of the area to a major road (Highway 66/91), and the presence of dirt roads throughout the area could cause protection problems. Elimination of grazing and control of ORV use would also protect crucial Desert Tortoise habitat and possible Mohave Ground Squirrel habitat. It would increase forage available for Desert Tortoises and may allow populations to rise.

25) CALICO MAN SITE

Restricting surface mining would continue to protect what may be the only site of Pleistocene man in the contiguous United States with materials greater than 70,000 years old. However, mining restrictions would curtail future exploitation of this area's bentonite and zeolite deposits.

26) AFTON CANYON

Implementing the proposed management guidelines for Afton Canyon would protect and enhance one of the largest riparian and marsh habitats in the CDCA. These habitats are among the most productive and heavily used by desert wildlife. Breeding and wintering bird surveys in riparian thickets at Afton Canyon indicated greater numbers of bird species than any other CDCA habitat surveyed. Two species being considered for the BLM sensitive species list, the Vermilion Flycatcher and Summer Tanager, breed or are potential breeding species. The ponds support one of two Pacific Pond Turtle populations in the CDCA and a disjunct population of Pacific Tree Frogs. The Desert Bighorn, which is being considered for the BLM sensitive species list, occurs in the Cady Mountains and depends on the important water source in Afton Canyon. Maintaining water quality and flow would protect aquatic species and habitats, ensure the presence of water for Bighorn Sheep and other wildlife species, and provide the moisture necessary to maintain these valuable habitats. However, maintaining the present campground would permit continued severe disturbances to most wildlife species and habitat that has been destroyed by ORV use, camping and vandalism through pasture.

Excluding incompatible land uses in the canyon and in a surrounding buffer zone would prevent future conflicts with the goals of preserving and enhancing wildlife resource values. Removing tamarisk and planting cottonwood and willows would restore natural vegetative cover, prevent tamarisk from spreading into other areas, and prevent declines in bird species diversity and density that occur when tamarisk replaces cottonwood/willow riparian habitat. Increased visitor use could impact cultural values. Increased ranger patrol and monitoring would facilitate implementation and enforcement of the management guidelines, and will decrease vandalism.

Withdrawal from the mining entry would impact potential mineral development. The most significant mineral deposits in the proposed ACEC lie in a fault zone long known for iron and gold deposits and recently identified by an airborne geophysical survey for possible uranium. Magnesite was once mined in the ACEC, but it is doubtful that this deposit will again become profitable under present economic conditions.

There should be a substantial increase in sightseeing, hiking, nature study, and other similar nature-oriented activities due to elimination of present disturbances. However, current ORV users would have to use other areas.

27) FORT SODA

Increased protection from ORV activities and posting of more signs should protect the springs and ponds which support the only natural population of Mohave Chub, a federally listed endangered species. Management should also protect the marsh habitat. Close monitoring of water use at Zzyzx Springs, water quality in the marshes and chub ponds, and of future water-requiring activities would prevent adverse impacts to the water source. Marsh enlargement would provide more habitat. Restriction of ORV use should limit damage to archaeological sites.

28) INDIAN SPRINGS

Removal of all burros and the construction of an exclosure would allow severely deteriorated vegetation and soils to recover. Wildlife use of the site would increase.

29) FORT PIUTE

Exclusion of grazing along Piute Creek and in the riparian vegetation would reduce erosion and improve habitat and water quality. Habitat quality would be improved further through removal of tamarisk, planting of cottonwoods and willows, and providing water to livestock outside of the creek bed and main channel.

Increased water availability and closure of the jeep trail entering the creek from Lanfair Valley to the west would reduce disturbance to Bighorn Sheep and encourage their use of the Piute Gorge area.

Vehicles would be excluded from the area, causing persons incapable or unwilling to walk in to go elsewhere for recreation. However, vehicle and camping restrictions would further reduce pressures on the riparian vegetation and wildlife. This restriction and the exclusion of grazing would minimize damage to rock art, prehistoric campsites, etc. and the historic "fort" associated with this National Register of Historic Places site. Tamarisk removal might impact archaeological sites, because this vegetation is too thick to allow a pre-disturbance archaeological survey.

30) KELSO DUNES

Exclusion of grazing, controlling burro populations, and continuing the present vehicle closure would protect this dune system and its highly specialized sand-dwelling fauna, including seven endemic invertebrate species. It is the only protected habitat for the Mojave Fringe-toed Lizard. Continuing the present vehicle closure would protect wildlife habitat and populations, including endemic species, from the severe deleterious impacts associated with ORV use. Excluding livestock grazing and controlling burro populations would remove the primary remaining negative impact to wildlife resources. It would prevent habitat degradation by overgrazing and trampling, and destruction of burrows used by fossorial vertebrates. Withdrawal from the mining laws would limit exploration and development of gold, platinum, paladium, and rhodium deposits which occur here and might impact active iron mining of the sands. It should be noted that there are at least 19 unpatented mining claims in the area.

31) BARREL SPRINGS

Restricted mining and vehicle access and fencing should reduce impacts to the archaeological sites from mining and illegal collecting. These restrictions should also protect the spring as a water source for transient wildlife and as an oasis for resident wildlife.

32) AMBOY CRATER

Resticting ORV use and foot traffic would protect the crater (a designated National Natural Landmark) from ORV damage and litter.

33) ANCIENT CREOSOTE RINGS

Restriction of ORV activity, future rights-of-way and mining activities, and the acquisition of private land would protect these creosote rings (the oldest living plants known) from disturbance.

34) JUNIPER FLATS

Preventing or limiting access to the region would reduce surface and subsurface damage by ORVs and by illegal collecting to an extremely high diversity and density of cultural resource sites, including a prehistoric village, temporary camps, and historic sites. Excavation/recovery of village and burial sites would be incompatible with Native American values.

35) WHITEWATER CANYON

Restriction of vehicle access and prohibition of camping would decrease disturbance to the habitats which support many migrant birds and breeding Prairie Falcons. Many reptiles present in this ACEC, particularly the Rosy Boa, show a rare blend of morphological characteristics from both coastal and desert subspecies. Frequent road patrol would decrease illegal collection of reptiles in the canyon and would reduce vandalism of cultural resources.

Designation of the area as an ACEC, coupled with improved habitat condition and preservation of riparian habitat, would result in increased visitation by hikers, sightseers, bird watchers, and hunters. Increased use or minor facilities development would result in minor negative impacts, in spite of increased road patrols and careful site design. Any disturbance to the upper canyon occupation sites is incompatible with the concerns of the Cabezon-Morongo Cahuilla Indians.

36) FRINGE TOED LIZARD HABITAT

Protection of habitat reserves would provide a refuge for the Coachella Valley Fringe-toed Lizard, a species proposed for Threatened status by the U.S. Fish and Wildlife Service and known to exist only in the dune system found in the Coachella Valley. Protection of this habitat would also benefit several other sand-dwelling species limited to this dune system or to restricted ranges in the region of the Salton Trough, such as Flat-tailed Horned Lizard and seven invertebrate species. Ranger patrol in regions currently receiving ORV use, and posting of signs prohibiting ORV use, could be expected to minimize disturbance in these habitats. Minor positive impacts on the production and maintenance of the standing crop of annual plants would help stabilize the sand dunes. Cultural resources would be less vulnerable to vandalism due to restricted vehicular access, but they would also be subjected to less protection when vehicular ranger patrols are limited by the no-vehicular-access stipulations.

37) IRON MOUNTAIN (Army Camp)

Restricting vehicular access, fencing, and helicopter and road patrolling would reduce further deterioration of the unique rock alignments and historic military features. Disturbance to wildlife would decrease, and a nearby Prairie Falcon nest would receive increased protection for the nest site and foraging area. Interpretive exhibits would negatively impact the area through increased public exposure.

38) RICE VALLEY DUNES

Closure of the dunes and patrol during peak ORV-use periods would be universally beneficial to the many sand-dwelling species of wildlife. Protection would be provided for a new species and genus of butterfly (Family Saythrididae) being considered for "sensitive" status by the BLM. It is known to exist only in this dune system.

39) CHUCKWALLA VALLEY DUNES

The dune thickets of Chuckwalla Valley are one of only two such in the CDCA. Closure of the dunes would only assure the immediate protection of the dunes themselves. The proposed studies of grazing and energy leasing would provide data to determine the effects of these activities on the dune process and ultimately on the plant species which are responsible for the unique wildlife resource. Adequate preservation of the entire dune system would benefit the many bird species which breed and winter there, and would maintain the dunes as a foraging area for the Prairie Falcons which nest in the Chuckwalla Mountains. More intensive use of the area for camping, picnicking, hiking, scientific research, etc., could prove to be detrimental to both wildlife habitat and cultural resources.

40) CORN SPRINGS

Moving the picnic area will slightly improve the ecological condition of one of the few palm oases on public land in the CDCA. Disturbances to several unusual wildlife species, including Palm Borers, a rare beetle present only in native fan palms, and to cultural resources will be reduced. However, maintaining the existing campground would continue disturbances to wildlife. Elf Owl and Desert Bighorn, proposed BLM sensitive species, already have been displaced primarily by conflicts with incompatible human activities. Neither would be expected to return under proposed management.

41) SALT CREEK

Salt Creek is one of the few flowing streams in the CDCA. It contains a population of Desert Pupfish, a species being considered for BLM sensitive status and Federal Endangered status. The vegetation along Salt Creek supports a wide diversity of wildlife, including the Yuma Clapper Rail (a Federal Endangered species), the California Black Rail (a State Rare species), and seven bird species being considered for sensitive status by BLM. A number of significant wildlife species also occur here.

Acquiring privately owned lands or securing cooperative agreements with landowners would permit consistent management and protection of federally listed, State-listed, and sensitive species. Restriction of grazing around the creek would prevent destruction of streamside vegetation critical to the survival of the species. Restriction of vehicle use around streamside vegetation, and permitting vehicle use only on existing roads elsewhere, would halt the destruction of riparian vegetation and prevent increased soil compaction, erosion, and siltation. Creation of artificial ponds and elimination of exotic plant species would provide additional habitat for the Desert Pupfish and would enhance habitat for the Black Rail, Yuma Clapper Rail, and other bird species. Coordination with Native Americans would ensure protection of their expressed values.

42) SAN SEBASTIAN MARSH

San Sebastian Creek is one of the rare, perennial surface water systems in the desert. It culminates in San Sebastian Marsh. The creek contains the most significant population of Desert Pupfish known. The marsh supports an isolated population of

Leopard Frogs (San Sebastian Leopard Frogs) whose only known remaining breeding site occurs at Harper's Well. A wide diversity of wildlife is found here, including 93 species of birds.

Acquiring privately owned lands or securing cooperative agreements with landowners would permit consistent management and protection of the wildlife dependent on this riparian habitat. It would directly protect the local Desert Pupfish and Leopard Frog populations whose habitat is currently being threatened by agricultural development and drops in ground water levels. Retaining the closure to vehicle use would prevent destruction of cultural resources and important riparian vegetation and resultant soil compaction, erosion, and siltation. Fencing of Harper's Well would directly benefit the Leopard Frog by reducing disturbance of the population and preventing illegal vehicle entry. Signs at Harper's Well would have the same beneficial effect on the Leopard Frog. Construction of a flood control levee at Harper's Well would protect cultural resources, but would have a serious, deleterious effect on the only remaining historic breeding site of the Leopard Frog, and a levee would disrupt the natural hydrology of the area. Construction of a pool below Harper's Well would enhance survival of the Leopard Frog. Efforts to eradicate or control exotic fishes in the creek would benefit the pupfish by reducing competition for food and space. Interpretive programs would have a negative impact on wildlife and cultural resources, but would provide increased recreational opportunities. Regular ranger patrols would protect all resources by increased public compliance with management recommendations. Coordination of management and interpretive activities with the elders of the Cahuilla groups would ensure protection of traditional use.

This area is already withdrawn from mineral entry.

43) COYOTE MOUNTAINS

Controlling vehicle access would reduce visitation, resulting in less vandalism of cultural resources, less impact to scenic values, and reduced disturbance to wildlife. Access limitations would reduce recreational use by rockhounds and others. Limiting fossil collection would decrease the rate of depletion of this resource. Interpretive facilities would encourage visitation and result in increased rates of degradation of palentological, cultural and wildlife resources.

44) PLASTER CITY

Restricting vehicle access and patrolling the area would displace vehicle enthusiasts using the open area. These users would be displaced to other areas. Limiting access and fencing sites would partially protect numerous cultural resources, including camps, lithics, and cremation loci. The cremation loci are of great concern to local Native Americans. Wildlife habitat degradation would decrease, and vegetation production would increase.

This area is already withdrawn from mineral entry.

45) YUHA INTAGLIOS

Barriers to vehicle traffic near the intaglios would prevent further damage to 13 gravel effigies, as well as 10 other archaeological sites. Allowing vehicular access via Hacker Drive would provide adequate access to the general area. Development of a visitor kiosk and footpath would allow controlled visitation. Restoration of the intaglios would return them to a condition similar to pre-damaged condition.

Construction of a physical barrier around the intaglio sites and restriction of access to foot traffic only would result in a sizeable portion of habitat being reserved for the Flat-tailed Horned Lizard, a species being considered for sensitive status by the BLM. All other resident wildlife would also benefit from habitat protection.

This area is already withdrawn from mineral entry.

46) ALGODONES DUNES

The Algodones Dunes is the largest dune system in California. This extremely uncommon habitat type supports a wide variety of unique animal species, including nine endemic beetles (one of which is offcially proposed for Federal Threatened status), a new species of lepidoptera, the Colorado Fringe-toed Lizard, and the Flat-tailed Horned Lizard. A dense microphyll woodland occurring along the dune edge is an extremely important area for breeding and wintering birds. The State-listed Rare Black Rail occurs along the Coachella Canal. Several State-listed Rare and Endangered plant species will receive protection.

The management guidelines proposed for this ACEC would continue the existing vehicle closure and withdrawal from mining entry.

47) TUMCO

The historic remains of an 1800s gold extraction operation and mining town would be protected, as would prehistoric remains representing food collection and processing activities. Native American shrines and ritual sites would be protected from further destruction. ORV recreation will be reduced, as would opportunities for rockhounding.

48) PILOT KNOB

Fencing, signing, and patrolling this area would partially protect four intaglios (three horse and one human figure), sleeping circles, trails, lithic scatters, and an historic site from degradation due to human disturbance. This area is already withdrawn from mineral entry.

49) LAKE CAHUILLA

Limiting vehicles to designated roads and patrolling would protect a small vestige of the 200 mile lakeshore. Protection of this area would preserve prehistoric campsites and food processing loci. Designating the area as an ACEC may also increase the public attention to the area, resulting in increased vandalism. This area is already withdrawn from mineral entry.

50) DESERT TORTOISE NATURAL AREA

Designation of the Desert Tortoise Natural Area (ACEC) would generally result in positive impacts to wildlife, recreation, cultural resources and visual resources, but would reduce or eliminate mineral exploration and development, grazing and ORV use. Designed to preserve the Desert Tortoise, the Desert Tortoise Natural Area is one of the few areas in the CDCA with a completed Wildlife Habitat Management Plan that is in the process of implementation. Several actions have been implemented or are underway that are highly beneficial to the desert tortoise and other wildlife: termination of grazing privileges elimination of vehicle use; construction of a fence; an active land acquisition program construction of interpretive facilities and trails; and the proposed withdrawal of public lands from the 1872 mining laws. These actions benefit rare vegetative resources. Currently. there are problems with vandalism of tortoises and habitat (shooting. etc.). from unauthorized vehicle use, and unsolved they will jeopardize the tortoise source, particularly the tortoise, are expected to escalate with increased visitor usage. Vandalism, livestock trespass, and unauthorized vehicle use would be reduced management. In the Use Alternative, vandalism is expected to be much greater because of the adjacent vehicle open area. ORV use there will jeopardize the tortoise populations within one-half mile inside ACEC boundaries. ACEC designation will generally result in positive effects to the recreation program. Visual Resource Management goals will be met, as the area is managed to retain natural characteristics. Wilderness values will be unaffected, as the area did not qualify as a Wilderness Study Area. Vehicular-oriented recreation opportunities would be eliminated, as such uses would be incompatible with the goals of Tortoise Preserve management. This would be, at most, a slight impact because of the area's small size. All other forms of recreation, except hunting and mineral collecting, would be moderately to highly enhanced due to the provision and maintenance of quality opportunities for activities such as photography, nature study, painting, day hiking, and birdwatching. Education and research uses would benefit significantly from ACEC designations, and proper protection and interpretation of the area's resources would be expected.

The wildlife recommendations for management of this ACEC will primarily benefit cultural resources and Native American values by reducing surface impacts to cultural resources located within the exterior boundaries of the preserve. Although there is a potential impact to material resources through collection and concern that access be provided for Native American traditional use the management guidelines and potential impacts of this ACEC on cultural resources are for the most part positive.

The area has a low to moderate mineral potential, primarily for energy minerals. However, its proposed mineral withdrawal would prevent location of new claims for the uranium and thorium potential. Though part of this area is classified as a Prospectively Valuable Geologic Structure for oil and gas, it would not be leased under any of the alternatives.

part IV-d

Unavoidable Impacts - Irreversible Commitments - Short vs. Long-Term Productivity

d-1

ADVERSE IMPACTS WHICH CANNOT BE AVOIDED

All plan alternatives contain the management capability to reduce the potential magnitude of impacts revealed by the preceeding analysis. Potential negative impacts would be avoided with careful siting, design, monitoring, and enforcement.

Notwithstanding this fact, there are a number of unavoidable adverse effects which would be attributed to each alternative. While those effects cannot be quantified, given the general nature of the plan alternatives, they may be described in relative terms as follows:

- Air Quality. The main threats to air quality associated with the plan alternatives are power plants, mineral exploration and development, agriculture, and motorized vehicle use. Increased levels of hydrogen sulfide, sulfur dioxide, nitrous oxide, and particulates would occur in all alternatives. Although ozone and other photochemical pollutants are also likely to increase, most of these would be transported into the CDCA from adjacent urban areas.

The extent of potential air pollution in each alternative would correspond to the amount of land allocated to impacting activities. Motorized vehicle open areas would increase dust pollution, although open areas would not be the only source of dust produced in the CDCA. Areas designated for on-road vehicle use as well as mining and agricultural operations would also pose potential dust problems.

Power plant siting areas would increase the risk of air quality deterioration. The actual number of facilities, however, would be approximately the same in all alternatives. Projected demand is provided for in each alternative though a combination of BLM and private lands. Emissions from mineral extraction operations are also expected to contribute to air pollution. Specific mine locations, however, are not delineated in the alternatives.

- Water. Potential deterioration of water quality would occur in all alternatives. Power plants and some mineral extraction facilities pose the greatest problems. Surface waters, which are susceptible to disturbance by many surrounding land uses, would be subject to reduced flow, contamination, and siltation. Ground water would be depleted as it is developed for consumption, industrial, and energy purposes. These activities also may lead to contamination of ground water resources. Some mining activities further involve the pumping of acid solutions into the ground for extraction purposes.

- Soil. The vulnerability of soil to disturbance depends on the specific type and intensity of use occurring in each alternative. A person merely walking across the desert can break the soil crust; concentrations of people, vehicles or some animals can cause far more extensive and more long-lasting damage. Once the vegetation is denuded and erosion occurs, it may take decades, if not longer, to restore an area to its former condition. The most susceptible soils are those having a high silt content, shallow soils commonly occurring in the mountains, and soil already disturbed. Compaction is associated with soil erosion. Compaction compresses the soil profile, reducing the air spaces between soil to absorb moisture, and the insulating qualities of the soil.

Off-road motorized vehicle use, domestic livestock grazing, mining and construction-related activities would cause disturbance of the surface and accelerate erosion in all alternatives. The extent of potential disturbance varies by alternative. Adverse impacts would be greatest in the No Action and Use Alternatives. Impacts in the Balanced and Protection Alternatives would be reduced.

Activities which cause extensive soil disturbances, such as off road vehicle activity and mining; activities which create substantial areas of impervious surfaces such as urbanization; and activities which contaminate the soil, such as waste diposal, would have a negative effect on arable lands. Arable lands would be adversely affected by the depletion of water supplies, or the pre-emption of water rights, erosion of top soil, or the creation of impervious surfaces.

However, restrictions affecting the potential use of arable lands for agriculture would have an inverse relationship to that described above; greatest impacts would occur in the Protection Alternative, followed by Balanced, Use, and No Action respectively.

Vegetation. All types of vegetation are directly affected by a variety of human-related activities provided for in all the alternatives, including: motorized vehicle use off roads, mining, urbanization, and construction-related activities. Effects range from injury and disturbance of individual plants to massive destruction of the vegetation. In general, when the soil is disturbed, vegetation is also affected. Motorized vehicle use, grazing, construction-related activities, and others will cause both soil compaction and erosion, and decrease vegetative productivity.

Persistent and heavy grazing by domestic livestock will decrease available forage, especially in areas of concentrated use such as water sources. Unpalatable and toxic weed species, including Russian thistle, prickly poppy, loco weed, matchweed and others will replace forage species removed by livestock. Perennial grasses are vulnerable to heavy grazing pressures, but even annuals, forbs, grasses, and short-lived perennials may be reduced if they are consumed before seeds can be produced and if the soil becomes too compacted for favorable germination of remaining seeds. Intensive grazing would decrease the total biomass of the vegetation in addition to altering the composition of the vegetation. However, even in areas of less intensive grazing, forage plants will decline in relation to non-forage plants and eventually the composition of the vegetation will change. Some of the larger non-forage species such as Joshua tree, yucca, and cactus, would increase in range lands.

Impacts to the vegetation would be greatest in the Use Alternative, diminishing in scale under No Action, Balanced, and Protection Alternatives.

Wildlife. Losses to wildlife in each alternative would occur when wildlife habitat is disturbed or when wildlife itself is killed or injured. The Protection Alternative would have the least adverse impacts followed in descending order by No Action, Balanced, and Use.

Motorized vehicle use poses a variety of problems for wildlife and wildlife habitat. While nearly all habitats are vulnerable to vehicle impacts,some are especially sensitive and significant, including riparian habitats and the habitats of key species. Loss of habitat is also a consequence of development such as utilities and mining. These activities virtually eliminate portions of natural habitats and replace them with buildings, roads, parking lots, dump sites, and other man-made improvements.

Intensive grazing by domestic livestock, feral burros, and wild horses, can effect long-term changes in wildlife habitat and wildlife populations. Among the more significant consequences of grazing are: reduction of forage, trampling of nest sites and burrows, loss of cover, increased competition for available water, and competition for space. Riparian areas and water sources are susceptible to impact because wildlife, livestock, and burros all congregate there. When these areas are heavily used by livestock or burros, wildlife is reduced.

Visual Quality. Sparse vegetation, long open views, and clear air combine to make the desert particularly sensitive to visual impacts. Placing electrical transmission lines, power plants, mineral extraction facilities, and other developments in areas of high scenic quality will impair the natural landscape character. Besides the impacts of structures themselves, the typical by-products of many operations may also affect visual quality. For example, stack emissions from power plants, mining facilities, and industrial operations or dust from vehicles and mining practices would impair visual quality. Mining scars, eroded trails and roads, motorized vehicle open areas, and other disturbed areas are also sources of visual degradation.

Development would impair visual quality in all alternatives but is likely in relatively limited areas. The Use Alternative poses the greatest threat, followed by No Action, Balanced, and Protection Alternatives.

Cultural Resources/Native American Values. Any activity which disrupts the soil and vegetation will adversly effect prehistoric and historic cultural resources, including utilities, mining, agriculture, motorized vehicle use, and concentrated recreational use. Domestic livestock grazing, burros and wild horses, and some wildlife management techniques would also disturb surface sites, especially in concentrated use areas. Any of these activities will disturb sensitive sites, including temporary camps, pottery, lithic scatters, trails, historic structures, as well as less vulnerable sites such as the ancient rock alignments called intaglios. Increased access and awareness poses a different kind of problem. When more people are present in areas containing cultural resources, chances of theft and vandalism are increased. Native American values would be impaired by the activities which disturb surface sites as well as by activities which may cause no physical damage but which violate religious beliefs. Entering a sacred area for any purpose by a non-Native American, for example, can be a violation of the beliefs of certain Native American groups.

Damage and deterioration would occur to material cultural resources, including surface and buried sites, and Native American traditional values in all alternatives. Related to the amount of area available to potentially impacting activities in the various alternatives, the order of exposure to impact would be: No Action, Use, Balanced, and Protection.

Wilderness. When wilderness study areas are found to be nonsuitable and placed in Multiple Use Class L, M, or I, the risk of impairment of their wilderness values would be increased. Incompatible uses such as motorized vehicles, utilities, and intensive livestock grazing could be permitted. The result: wilderness values would be degraded or lost.

Congressional wilderness designation insures that wilderness values will be protected. While this designation is the most effective means available for protecting wilderness values, sensitive natural resource values can be protected by other means. The multiple class guidelines, plan elements, and ACECs provide a variety of methods to protect sensitive values, including wilderness values. In some cases, strict controls designed to protect wildlife, cultural resources, and other such resources may also prevent wilderness values from degradation. The fact that an area is found to be unsuitable does not necessarily mean its wilderness values would be lost.

The degradation of wilderness values would be most likely to occur in the No Action Alternative since it includes no proposed wilderness. In the other alternatives, risk would be reduced in the Use, Balanced, and Protection Alternatives, respectively in proportion to the amount of proposed wilderness contained in each.

Recreation. Changes in recreational opportunities and experiences would occur in all alternatives. The two main categories of use -- concentrated (primarily motorized vehicle-oriented) and dispersed -- would be affected differently. While restrictions on vehicle access could enhance such activities as backpacking, birdwatching, and other nature-oriented recreation, they would have an adverse effect on motorized vehicle oriented use. Organized group activities and competitive events, in particular, would be adversely affected.

Impacts would vary between alternatives depending on the amount of land available for recreational activities. In general, the Protection Alternative would provide the most favorable opportunities and experiences for dispersed recreation use, followed by the Balanced, No Action, and Use Alternatives. For concentrated recreation use, the opposite would apply.

Grazing. Reduction in forage allocation from present levels would reduce the number of cattle and sheep in the Balanced, Protection, and Use Alternatives. These reductions will be discussed further in the following socioeconomics section.

Burros and wild horses would be reduced in all alternatives, and maintained in the No Action Alternative. The greatest reduction would occur in the Use Alternative, followed by the Balanced and Protection Alternatives.

Socioeconomics. Adverse socioeconomic effects would largely result from cuts in domestic livestock grazing and restrictions on mineral exploration and development. Livestock operators would sustain reductions in perennial forage allocations increasing from the Use to the Protection Alternative. Users of ephemeral forage would be restricted as well in both turnout dates and amount of available forage. Elimination of grazing privileges would put 25 cattle operations out of business. Sheep operators would not be as severely affected, but half of these operations would be forced to close, while the rest would be greatly reduced in scale.

Opportunities for mineral exploration and development would be limited by Multiple Use Class C or L designations and some plan element and ACEC restrictions. Through the year 2000, it is expected that only the Protection Alternative would significantly restrict the overall economy of the CDCA. The Balanced Alternative would begin to restrict the mineral sector of the economy by the 1990s, but would not have a noticeable effect on the overall economy until after the year 2000. The Use and No Action alternatives are favorable to mineral development and would have little negative effect, except on oil and gas and other energy minerals.

Life styles would suffer or benefit in all alternatives, depending on the particular values involved. Preservation-oriented values would be favored in the Protection Alternative and decreased in the Balanced, No Action, and Use Alternatives. The reverse would be true for consumptive-oriented values.

Recreation use would not be significantly affected, although a shift in use patterns would occur. The exception would be the creation of an East Mojave National Park, which would add an additional one-half to one million visitor-use days per year. This would generate increased revenues and expenditures in local economies.

d-2

IRREVERSABLE and IRRETRIEVABLE COMMITMENTS OF RESOURCES

All alternatives involve, to varying degrees, irreversible and irretrievable commitments of certain resources. These would result from the allocation of lands to consumptive uses such as mining, motorized vehicle free play, utilities and energy development, and grazing, as well as designations precluding future development as in the case of wilderness establishment. Key plant and wildlife species might be severely depleted or extirpated, material cultural resource sites and traditional Native American values damaged or destroyed, prime visual resources impaired, and other sensitive natural resources degraded or lost.

No Action. This alternative potentially exposes the greatest amount of land and resources to irreversible adverse impacts. Although the consequences of No Action are difficult to predict, substantial commitments would be made in all resources if present trends continue.

Mineral exploration and development would be undertaken throughout the CDCA, except in limited areas withdrawn from mining. Continued deterioration in air quality in the vicinity of mines would be expected in association with the crushing, grading, refining, and other processing steps. Sulfur dioxide, particulates, and other pollutants would be dispersed. Mining would also deplete groundwater supplies and increase pollution of both surface and ground waters through leaching of chemicals from mine tailings and evaporation ponds. Plants and animals would be negatively impacted in disturbed areas. Oil and gas leasing, for example, would threaten many key habitats, including 37 percent of that of the Desert Tortoise, 24 percent of the range of the Mohave Ground Squirrel, and 87 percent of the Andrews Dune Scarab Beetle. Cultural resources and Native American values, visual resources, and recreation all would sustain significant irreversible adverse impacts under this alternative.

Severe impacts from motorized vehicle use would occur in open areas amounting to 628,000 acres. In those areas, air quality would be reduced by increased dust and vehicle emissions. Soils would be exposed to wind and water, resulting in accelerated erosion.

Destruction of 250,000 to 370,000 tons of plant biomass could occur, including 8 Rare, Threatened, or Endangered species. Over 20,000 acres of unique plant assemblages could also be lost. Loss of habitat and declines in key wildlife, including Desert Tortoise, Golden Eagle, Prairie Falcon, Mule Deer, Bighorn, and others, would be sustained. Impacts to cultural resources and Native American values would be substantial.

Significant visual quality degradation could be sustained on 26 percent of the CDCA.

Coal-fired power plants, if constructed on areas available for plant siting, would cause far-reaching effects on air quality and would increase levels of nitrogen oxides and sulfur dioxide. Geothermal plants would contribute relatively small amounts of hydrogen sulfide. All types of plants would deplete water supplies and would threaten water quality. Plants sites, utility lines, and microwave facilities would disturb soil, vegetation, wildlife, and cultural resources in and adjacent to the developed areas. Actual impacts would depend on the specific location of each facility. Transmission lines and other utility structures would have a major long-term impact on visual quality. Recreation opportunities and experiences would be reduced as a result of the impacts on air quality, visual quality, and other resources.

Domestic livestock grazing would cause erosion and soil compaction in areas where livestock concentrate. Riparian areas would be particularly vulnerable and would sustain further impacts degrading vegetation, wildlife, and water quality. Thirty-nine unique plant assemblages and 49 Rare, Threatened, or Endangered plant species would be subject to impacts, although evidence of actual impact from grazing on these plants is inconclusive. Twenty-four of the 68 allotments are currently grazed above the carrying capacity and 30 allotments are in fair or poor condition. Wildlife habitats and numbers would decline in general. Bighorn Sheep, Desert Tortoise and Mule Deer are major species that would be affected. Sensitive habitats such as riparian areas and washes would decline severely. Grazing would also damage and destroy cultural resources and Native American values.

Impacts from burros and wild horses would be similar to those from grazing. Thirty unique plant assemblages and 75 Rare, Threatened, or Endangered species would be subject to impact. Impacts on wildlife and cultural resources would be highly negative.

✪ Protection. This alternative makes the least irreversible and irretrievable commitment of resources of any alternative.

Mineral exploration and development would have slightly negative impacts on soil and water, but no significant impact on air quality, compared with the present situation. Six unique plant assemblages and 16 Rare, Threatened or Endangered species could be potentially impacted. Wildlife habitat loss and declines in species numbers would occur on up to 0.4 million acres of locatable, 0.5 million acres of leasable, and 0.03 million acres of saleable mineral resource areas. Only 3 percent of the area identified as having concentrations of cultural resource values would probably be significantly affected due to multiple use class restrictions.

Impacts from motorized vehicles would expose less than 1.0 percent of the CDCA soils to severe erosion and compaction. Over 100,000 tons of plant biomass could be lost, including 8 Rare, Threatened, or Endangered species. One unique plant assemblage amounting to 15 percent of its total distribution would be impacted. Significant losses to wildlife, including Mohave Ground Squirrel, Colorado Fringe-toed Lizard, and Desert Tortoise, could be sustained. Ninety prehistoric and historic cultural resource sites and 53 Native American sensitivity areas would be subject to degradation.

Power plants and utilities could cause significant impacts to all sensitive resources in this alternative, but the total area exposed would be substantially less than that under the No Action Alternative. Nine unique plant assemblages would be exposed in 5 utility corridors and 17 Rare, Threatened, or Endangered species would be exposed in 9 corridors. Thirty key wildlife species would be potentially impacted, as well as 25 percent of the Mohave Ground Squirrel habitat and 9 percent of the Golden Eagle habitat. Approximately 77,440 acres of highly sensitive Native American value and 14,500 cultural resource sites would be vulnerable to irreversible losses.

Significant visual quality degradation could be sustained on one percent of the CDCA.

Livestock grazing would be reduced to relatively low levels in this alternative and would be eliminated in the No Grazing Subalternative. Impacts to sensitive resources would be reduced in the Protection Alternative compared with those of No Action, but would still occur to a number of resources including vegetation, wildlife, and cultural resources. Obviously, no impacts due to livestock would occur in the No Grazing Alternative.

Despite reductions in herd sizes from present levels, impacts from wild horses and burros would be severe in the Protection Alternative. This alternative contains the greatest numbers of wild horses and burros of any action alternative.

From another perspective, however, 43 percent of CDCA public lands would be proposed for wilderness designation, severely reducing area available for mineral and energy exploration and development.

✪ Balanced. The Balanced Alternative provides for additional utility corridors, energy plant sites, greater acreage allocated to motorized vehicle free play and available to mining than the Protection Alternative. As a result, the potential impacts are also greater with attendant increased risk of irreversible impacts or irretrievable resource commitments.

Impacts from mineral exploration and development are similar to the Protection Alternative for air, water, and soil. Thirteen unique plant assemblages and 29 Rare, Threatened, or Endangered species would be potentially impacted. Impacts to wildlife could be sustained on approximately 1.9 million acres of locatable, 2.4 million acres of leasable, and 0.2 million acres of saleable mineral resource areas available for potential development. Forty-two percent of the area identified as having concentrations of cultural resource value could be potentially affected.

Motorized vehicles in this alternative would potentially accelerate erosion and compaction on 2.4 percent of the CDCA soils. Approximately 188,000 tons of plant biomass could be lost, along with 8 Rare, Threatened, or Endangered species and one unique plant assemblage. Impacts to wildlife species and habitats would be similar in nature to those described, although the magnitude of impact would be increased. Motorized vehicles also pose the risk of severe impact to 670 prehistoric and historic sites and 148 Native American sensitivity areas.

Ten percent of the CDCA could sustain significant visual impairment.

Power plants and utilities would affect sensitive resources in this alternative. More area would be available for development than in the Protection Alternative and the risk of impact would be increased. Unique plant assemblages would be potentially lost in 5 corridors. Utility development would also potentially impact 23 Rare, Threatened, or Endangered species. Twenty-seven key species could sustain impacts, as well as 53 percent of the Mohave Ground Squirrel habitat and 14 percent of the Golden Eagle range in the CDCA. Approximately 142,000 acres of highly sensitive Native American values and at least 20,000 prehistoric and historic sites would be exposed to impacts.

Visual quality could deteriorate on approximately 11 percent of the CDCA based on aggregate impacts.

The potential impacts from grazing would be slightly greater than in the Protection Alternative since livestock numbers are increased within allotments.

Vegetation, soils, wildlife, and cultural resources would deteriorate in some areas as a result of wild horse and burro populations sustained in this alternative despite reductions from present levels.

Fifteen percent of the public lands of the CDCA would essentially be precluded from economic development of resources such as energy and minerals through proposed wilderness designations.

Use. This alternative poses substantial risks to all sensitive resources. Levels of consumptive uses are the highest of any alternative, carrying a commensurate risk of irretrievable losses and irreversible adverse impacts.

Potential impacts to air quality, water, and soil are severe in this alternative. Thirty-two unique plant assemblages and 96 Rare, Threatened, or Endangered species could be impacted. Potential impacts to wildlife are highly negative. Degradation of wildlife resources could occur on 3.7 million acres of leasable, and 0.4 million acres of saleable mineral resource area. Approximately 79 percent of the cultural resource values would be exposed to risk under activities allowed within multiple use class guidelines.

Motorized vehicles would cause potential impacts to 11.8 percent of the CDCA soils between 900,000 and 1.6 million tons of plant biomass could be lost from production. In addition, 8 Rare, Threatened, or Endangered species and approximately 80 percent of a unique plant assemblage could sustain severe impacts. Many key wildlife species and habitats could be lost, including substantial portions of the total CDCA habitat of Desert Tortoise, Mohave Ground Squirrel, Mule Deer, Bighorn Sheep, Colorado Fringe-toed Lizard, Flat-tailed Horned Lizard, Couch's Spadefoot Toad, and Algodones Dune Beetle. It is further estimated that at least 5,315 prehistoric and historic sites and 157 Native American sensitivity areas would sustain heavy impacts.

The greatest opportunties for utility development exist in the Use Alternative. Thus, the risk to air quality, water, and other sensitive resources is relatively high compared to other alternatives. In this alternative over 20 Rare, Threatened, or Endangered plant species and many unique plant assemblages could be impacted. Thirty-seven wildlife species could sustain impacts as well as approximately 68 percent of the Mohave Ground Squirrel habitat and 23 percent of the Golden Eagle range. Potential impacts may be anticipated for at least 32,000 prehistoric or historic sites and approximately 230,400 acres of Native American sensitivity areas.

Visual quality may be degraded on up to 32 percent of the CDCA when all impacts are considered.

Livestock grazing in the Use Alternative poses somewhat increased impacts to sensitive resources compared with the Balanced Alternative. Impacts from burros and wild horses, however, would be reduced and would be the least of any action alternative.

Only 5 percent of CDCA public lands would be proposed for wilderness designation, so essentially irretrievable commitments precluding most mineral and energy exploration and development would be minimized.

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RELATIONSHIPS BETWEEN SHORT-TERM USES OF MAN'S ENVIRONMENT and the MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

A basic objective of each alternative is to establish an appropriate allocation of resources consistent with multiple use and sustained yield principles. Each alternative provides a different view of what is appropriate.

This section addresses each alternative from the perspective of short term uses versus the maintenance and enhancement of long term productivity in examining the major plan actions of each alternative summarized in detail in Table A-2 of this document.

No Action. This alternative responds to the demands for resource use and protection incrementally. Generally, land and resource management assumes a reactive pose which tends to maintain the status quo until a major conflict forces the resolution of a particular issue. While its goals and objectives are relatively unstructured, No Action encourages short-term uses of the environment for minerals, motorized vehicles, utilities and energy production, and grazing.

Mineral exploration and development is permitted on a majority of the BLM-administered lands in the CDCA. Subject to moderate controls, approximately 2,895,000 acres (60%) of locatable, 3,416,000 acres (70%) of leasable, and 303,000 acres (61%) of saleable mineral resource area would be available. The balance is subject to stringent controls or is withdrawn from further mineral entry.

Approximately 628,000 acres (5.2%) acre available for off-road motorized vehicle use and 7,496,000 acres (61.8%) for existing road and way use. In comparison, 3,402,000 acres (28%) are restricted to use on designated roads and ways while 605,000 acres (5%) are closed to motorized vehicle use.

This alternative does not constrain utility development to designated corridors nor power plant development to designated sites, but relies instead on ad hoc assessment of individual proposals. However, thirteen previously-approved power plant sites and 6 microwave communication sites are available. In addition, this alternative provides 77,000 acres for potential wind generation and 194,000 acres for potential geothermal development.

Total present perennial vegetation allocations in grazing allotments in the No Action Alternative for livestock, wild horses and burros, and wildlife are: 102,100; for 59,100, and 4,500 AUMs, respectively. Total ephemeral allocation are burros and horses, 1,800 AUMs and for wildlife, 2,200 AUMs. Ephemeral allocation for livestock are variable in this and the other alternatives and will be set annually. In contrast, the estimated carrying capacity of perennial vegetation is 95,900 AUMs. Burros and horses are allocated 114,400 AUMs within herd management areas. Thus, the No Action Alternative exceeds productive capability, taking short-term consumptive gains for long-term losses in range productivity.

Protection. The Protection Alternative would limit the potential expansion of mining, reduce motorized vehicle opportunities, and cut grazing. A large share of the CDCA would be set aside as wilderness or managed to preserve sensitive environmental values. Existing development and intensive uses would continue, but further expansion would be strictly controlled.

An anomoly in this alternative is the relatively higher level of burros and wild horses than in the Balanced and Use Alternatives. Negative impacts resulting from large numbers of these animals would partially offset gains in long-term environmental productivity achieved by this alternative. Establishing an East Mojave National Park and eliminating grazing in protection subalternatives would further enhance long-term productivity, but at a rather heavy cost to short-term productive use.

Mineral exploration and development subject to moderate controls would be available on 436,000 acres (8 percent) of locatable, 518,000 acres (10 percent) of leasable, and 26,000 acres (5 percent) of saleable mineral resource areas.

Approximately 93,000 acres (.8 percent) are open to off-road vehicle use while 600,000 acres (5 percent) are restricted to use on existing roads and ways and 5,880,000 acres (48.4 percent) restricted to designated roads and ways. 5,286,000 acres (43.6 percent) are closed to motorized vehicles.

The number of energy transmission and utility planning corridors is 15. Other major energy and utility components in the Protection Alternative include 6 approved power plant sites and 5 microwave communication sites. Further, on the multiple use class distribution of this alternative, 511,000 acres would be available for conventional power generation, 13,000 acres available for wind generation, and 26,000 acres available for geothermal development. It is estimated that this and the other alternatives would all accommodate the energy demands projected for the year 2000.

Forage allocations for livestock and Wild Horses and Burros are reduced, while those for wildlife are increased. Perennial forage allocations are 74,700 AUMs for livestock, 13,800 AUMs for Wild Horses and Burros and 5,600 AUMs for wildlife. Ephemeral allocations for wildlife and Wild Horses and Burros are 4,900 AUMs and 0 AUMs, respectively. Within herd management areas, a total of 50,300 AUMs are allocated to wild horses and burros. In sum, present consumptive use for livestock production and horse and burro foraging is reduced to within carrying capacities to gain long-term range improvement.

Balanced. This alternative provides for the protection of sensitive environmental values and, at the same time, accommodates increased use and development of CDCA resources. While less acreage of wilderness would be recommended than in the Protection Alternative, the Balanced Alternative would create substantial amounts of wilderness throughout the CDCA. Protection of wildlife, vegetation, and other natural and cultural resources would generally be favored in areas of high resource sensitivity. Consumptive uses would be afforded opportunity for growth, but would be encouraged where they would have the least potential for adverse impacts.

Opportunities for mineral exploration and development would exist subject to moderate regulatory controls on 1,856,000 acres (38 percent) of locatable, 2,443,000 acres (51 percent) of leasable, and 205,000 (42 percent) of mineral resource areas.

Approximately 289,000 acres are set aside as open areas for motorized vehicles. Approximately 4,457,000 acres are accessible by existing roads and ways and 5,114,000 acres on designated roads and ways. The total acreage closed to motorized vehicles is 1,914,000 acres.

The number of planning corridors for utilities is raised to 20 in this alternative, and other utility and energy components would remain the same. There would be 2,435,000 acres available for siting energy plants as well as 37,000 acres for potential wind generation and 100,000 acres for geothermal power generation.

Forage allocations for perennial vegetation include 79,200 AUMs for livestock, 10,900 AUMs for burros and wild horses, and 5,600 AUMs for wildlife. Ephemeral allocation for wildlife would be reduced to 3,800 AUMs. 47,200 AUMs would be allocated to burros and wild horses in herd management areas. Again, short-term consumptive use is reduced to keep within long-term production capability.

Use. While the more sensitive environmental values would be protected in this alternative, opportunities for short-term uses would be increased compared with the other alternatives. A limited amount of wilderness would be provided and key areas would be set aside as ACECs. The large majority of the CDCA, however, would be available for mining and other consumptive uses. Domestic livestock grazing would be increased but still below present levels. Wild horse and burro numbers would be decreased. The total area available to mineral exploration and development subject to moderate restrictions is approximately 3,731,000 acres (79 percent) of locatable, 4,106,000 acres (86 percent) of leaseable, and 460,000 acres (91 percent) of saleable mineral resource areas.

It is estimated that 1,306,000 acres would be open to motorized vehicles, 7,852,000 acres restricted to existing roads and ways, and 1,991,000 acres restricted to designated roads and ways. Approximately 679,000 acres would be closed to vehicle use in this alternative.

Utility and energy development options would be expanded compared with other alternatives. There would be 28 utility corridors, 13 approved power plant sites, and 6 microwave sites. Also provided would be 3,669,000 acres available for power generation. Approximately 77,000 acres would be available for wind generation and 194,000 acres for geothermal power generation.

Perennial forage allocations for livestock are 83,100 AUMs compared with 7,200 AUM for burros and wild horses and 5,000 AUMs for wildlife. An additional 3,000 AUMs of ephermeral forage are also allocated to wildlife. The herd management areas would provide 43,500 AUMs of forage for burros and wild horses. Maximum productive use through commerical grazing in the short-run would be kept still within carrying capacity to acheive long-term range resource stability.

part IV-e

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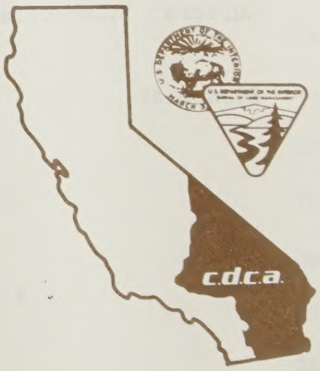

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DRAFT PLAN ALTERNATIVES AND DRAFT ENVIRONMENTAL IMPACT STATEMENT PREPARERS

The Draft California Desert Plan Alternatives portion of this document was prepared by members of the California Desert Plan Staff, assisted by BLM staff of the Bakersfield and Riverside District offices and the California State office. Considerable background information was developed through contracts with consultants. The offices listed, along with the Bureau of Land Management's Washington, D.C. office, provided reviews of initial drafts of the plan alternatives and draft EIS.

The following individuals had lead responsibility for assessment of environmental impacts as members of the EIS team:

Name	Position	Education/Length of Experience
Deane Swickard	Team Leader	- M.S. Environmental Science - 9 years experience
Jack Mills	Environmental Coordinator	- M.A. Regional Planning - 8 years experience
Albert Endo	Soil Scientist	- B.S. Soil Science - 21 years experience
John Adams	Soil Scientist	- Ph.D. Soil Science - 3 years experience
Duane Winters	Hydrologist	- M.S. Hydrology - 4 years experience
Peter Rowland	Botanist	- Ph.D. Biology - 1-1/2 years experience
John Hall	Botanist	- M.A. Plant Ecology - 5 years experience
Kristen Berry	Zoologist	- Ph.D. Zoology - 11 years experience
David Mensing	Recreation Planner	- M.A. Geography - 5 years experience
Robert Laidlaw	Cultural Ethnologist	- M.A. Anthropology - 7 years experience
Dale Bays	Economist	- B.S. Forestry 5 years graduate work in Economics - 9 years experience

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◆ PRINCIPAL AGENCIES AND ORGANIZATIONS AND PERSONS TO WHOM COPIES OF THE DRAFT PLAN ALTERNATIVES / ENVIRONMENTAL IMPACT STATEMENT ARE BEING SENT ◆

The following list of Federal, State, and local agencies; Native American tribes; and public service organizations will be sent copies of this draft plan. Also appended is a list of private non-profit organizations which have participated in this program and who represent the full range of public interests and values with respect to the California Desert Conservation Area.

Other individuals and corporations who have indicated interest in this program have been added to the mailing list now numbering about 3500. They will also receive copies of this draft plan alternatives/EIS. Other individuals, corporations and organizations will be provided copies of the Document upon request through response to the CDCA Draft Plan Alternatives/EIS Preview and newspaper advertisements.

FEDERAL AGENCIES

Angeles National Forest, USFS

Border Patrol, Department of Justice

Bureau of Mines, USDI

BLM, Arizona State Office

BLM, Las Vegas District Office

BLM, Nevada State Office

BLM, Phoenix District Office

BLM District Office, Yuma, AZ

China Lake Naval Weapons Center

Cleveland National Forest, USFS

Cooperative Extension, UCLA

Death Valley National Monument, NPS

Department of Energy

Edwards Air Force Base

Environmental Protection Agency

Federal Aviation Administration, DOT

Federal Highway Administration, - Region 9, DOT

Fish and Wildlife Service, USDI

Geological Survey, USDI

George Air Force Base

Heritage Conservation and Recreation Service, USDI

Inyo National Forest, USFS

Joshua Tree National Monument, NPS

National Parachute Test Range

San Bernardino National Forest, USFS

Sequoia National Forest, USFS

Soil Conservation Service, USDA

Twentynine Palms Marine Base

Water and Power Resources Service, USDI

Yuma Proving Grounds

CALIFORNIA STATE AGENCIES

Air Resources Board

Colorado River Board

Department of Conservation

Department of Fish and Game

Department of Parks and Recreation

Department of Transportation (Caltrans)

Department of Water Resources

Division of Mines and Geology of the Department of Conservation

Energy Resources Conservation and Development Commission

Highway Commission

Lands Commission

Native American Heritage Commission

Office of Planning and Research

The Resources Agency

Solid Waste Management Board

South Lahontan River Board

State Historic Preservation Officer

State Military Department - California National Guard

LOCAL GOVERNMENTS

Adelanto Mayor

Barstow Mayor

Blythe Mayor

Brawley Mayor

Calexico Mayor

California City Mayor

Calipatria Mayor

Coachella (city) Mayor

Desert Hot Springs Mayor

El Centro Mayor

Holtville Mayor

Imperial County Supervisor

Imperial Mayor

Indian Wells Mayor

Indio Mayor

Inyo County Supervisor

Kern County Supervisor

Lancaster Mayor

Los Angeles County Supervisor

Mono County Supervisor

Needles Mayor

Palm Desert Mayor

Palm Springs Mayor

Palmdale Mayor

Rancho Mirage

Ridgecrest Mayor

Riverside County Supervisor

San Bernardino County Supervisor

San Diego County Supervisor

Victorville Mayor

Westmoreland Mayor

PLANNING AGENCIES

Adelanto Planning

Barstow Planning

Blythe Planning

Brawley Planning

Calexico Planning

California City Planning

Calipatria Planning

Coachella City Planning

Coachella Valley Association of Government

Desert Hot Springs Planning

El Centro Planning

Holtville Planning

Imperial Planning

Imperial Valley Association of Governments

Indian Wells Planning

Indio Planning

Inyo County Planning

Inyo Mono Association of Governmental Entities

Kern County Planning

Los Angeles County Planning

Mono County Planning

Needles Planning

Palm Desert Planning

Palm Springs Planning

Palmdale Planning

Rancho Mirage Planning

Ridgecrest Planning

Riverside County Planning

San Bernardino County Planning

San Diego County Planning

Southern California Association of Governments

Southwest Border Regional Commission

Victorville Planning

Westmoreland Planning

PUBLIC & PRIVATE UTILITIES

California Public Utilities Commission

Continental Telephone

General Telephone

Imperial County Public Work Dept.

Los Angeles Water & Power

Metropolitan Water District of Southern California

Pacific Gas & Electric

Pacific Telephone

San Diego Gas & Electric

Southern California Edison

Southern California Gas

NATIVE AMERICAN TRIBES

Agua Caliente

Augustine

Barona

Big Pines Reservation

Bishop

Cabazon

Cahuilla

Campo

Chemehuevi Valley

Cocopa -Sommerton

Colorado River

Cuyapaipe

Fort Independence

Fort Mojave

La Posta

Lone Pine

Los Coyotes

Manzanita

Mesa Grande

Morongo

Pala

Pauma

Pechanga

Ramona

Rincon

San Manuel

San Pasqual

Santa Rosa

Santa Yorbel

Soboba

Torres Martinez

Yuma

ORGANIZATIONS

American Mining Congress

American Motorcycle Association

Archaeological Survey Association of Southern California

Associated Blazers

Boron Garden Club

California Association of 4-Wheel Drive Clubs

California Federation of Mineralogical Societies

California Garden Clubs, Roadrunner District

California Mining Association

California Off-Road Vehicle Association

California Racing Club

California Wilderness Coalition

Clean Sweep Racing Team

California Woolgrowers Association

Death Valley '49ers Incorporated

Desert Protective Council

Desert Rod and Gun Club of El Centro

Desert Tortoise Preserve Committee

Great Basin Foundation

High Desert Cattlemens Association

High Desert Chambers of Commerce

Inyo County Museum

Joshua Tree Community Association Incorporated

League of Women Voters of California

Los Angeles County Museum

Maturango Museum

Morongo Valley Conservation Association

Morongo Valley Chamber of Commerce

Motorcycle Industrial Council

National Audubon Society

National Outdoor Coalition

National Wildlife Federation

Native Plant Society

Natural Resources Defense Council

North American Land Sailing Association

Pfizer, Inc., Minerals, Pigments, and Metals Division

Regional Conservation Committee

San Bernardino County Museum

Sierra Club

Twentynine Palms Camera Club

Twentynine Palms Garden Club

United Mining Council of America

University of California

Western Mining Council of America

Wilderness Society

Wonder Valley Hiking Club

World of Rockhound Association

LIST OF APPENDICES

The following appendices are too voluminous in aggregate to publish as a part of the CDCA Plan Alternatives and Environmental Impact Statement document. However, a full set of appendices along with the Draft Plan Alternatives/EIS document have been placed for public review in 104 local public, college, university, and governmental libraries in California. A list of these libraries is contained in the January 1980 Draft Preview of the CDCA Plan/EIS. A limited number of appendix copies are available on request from BLM. Such requests should name the specific appendix document sought. Information on library locations of appendices or requests for specific appendices can be made to BLM using the address or telephone number given in the Public Participation Workbook in the cover pocket of this document.

	Appendix No.	Title
Plan	1.	Summary of Laws and Policies Relating to The Planning and Management of the CDCA
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CALIFORNIA DESERT CONSERVATION AREA

Sec. 601. (a) The Congress finds that —

(1) the California desert contains historical, scenic, archaeological, environmental, biological, cultural, scientific, educational, recreational, and economic resources that are uniquely located adjacent to an area of large population;

(2) the California desert environment is a total ecosystem that is extremely fragile, easily scarred, and slowly healed;

(3) the California desert environment and its resources, including certain rare and endangered species of wildlife, plants, and fishes, and numerous archaeological and historic sites, are seriously threatened by air pollution, inadequate Federal management authority, and pressures of increased use, particularly recreational use, which are certain to intensify because of the rapidly growing population of southern California;

(4) the use of all California desert resources can and should be provided for in a multiple use and sustained yield management plan to conserve these resources for future generations, and to provide present and future use and enjoyment, particularly outdoor recreation uses, including the use, where appropriate, of off-road recreational vehicles;

(5) the Secretary has initiated a comprehensive planning process and established an interim management program for the public lands in the California desert; and,

(6) to insure further study of the relationship of man and the California desert environment, preserve the unique and irreplaceable resources, including archaeological values, and conserve the use of the economic resources of the California desert, the public must be provided more opportunity to participate in such planning and management, and additional management authority must be provided to the Secretary to facilitate effective implementation of such planning and management.

(b) It is the purpose of this section to provide for the immediate and future protection and administration of the public lands in the California desert within the framework of a program of multiple use and sustained yield, and the maintenance of environmental quality.

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The California Desert
Conservation Area : plan

United States Department of the Interior:

As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering the wisest use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historic places, and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to assure that their development is in the best interests of all our people. The Department of the Interior also has a major responsibility for American Indian reservation communities and for people who live in Island Territories under the United States administration.